

# **Service Manual**

## **Model UM500**

**AM/FM Radio & Double Cassette  
with 3CD Player**

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# ALIGNMENT

## LIST OF TEST EQUIPMENT

- AC millivoltmeter (VTVM) (above 100 kohm/V)
- Digital AM/FM signal generator
- IF sweep generator
- Oscilloscope
- Digital voltmeter
- Wow & Flutter meter
- Frequency counter

## GENERAL PREPARATION

1. Check the source voltage.
2. Set the bandswitch to the being aligned.
3. Disconnect the FM telescopic antenna.
4. Keep the signal input as low as possible to avoid AGC action.
5. Standard modulation is 1000Hz 30% for AM.
6. Standard modulation is 1000Hz 22.5kHz deviation for FM.
7. Connect the signal generator between TP and GND.

## ALIGNMENT PROCEDURE

### FM SECTION

Modulation: 1000Hz / 22.5kHz dev. Input voltage: AC 120V output impedance: 4 ohms

Step	Alignment Frequency	Test Equipment	Signal In	Signal Out	Alignment	Remark
1	10.7MHz	1. FM sweep marker scope 2. Power supply	TP2 (Through cer. cap. 1000pF)	TP4	Adjust T101 T104 for maximum curve output.	1. Push On switch to ON. 2. Select FM Band. 3. Volume at minimum position. 4. Press memory 5 key
2	108MHz	1. DVM		TP7	Adjust L103 until the VTVM reading is 8V.	1. Volume at minimum position. 2. Press memory 5 key
3	90MHz	1. FM signal generator 2. Power supply 3. VTVM 4. Oscilloscope		Speaker	Adjust L107 for maximum output	Press memory 2 key
4	106MHz	Same as step 3		Speaker	Adjust TC101 for maximum output	Press memory 4 key
5	Repeat Steps 3 and 4 until no further improvement can be made.					

### AM SECTION

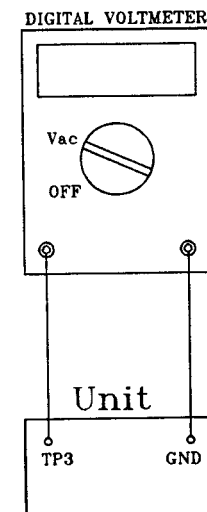
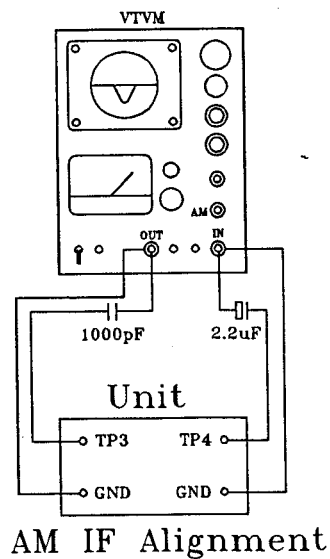
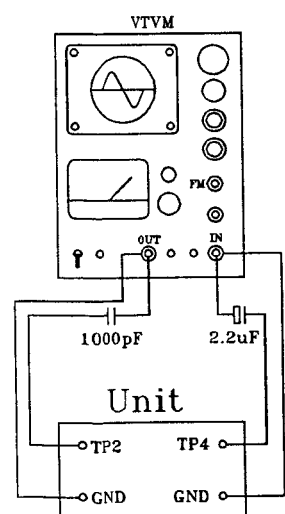
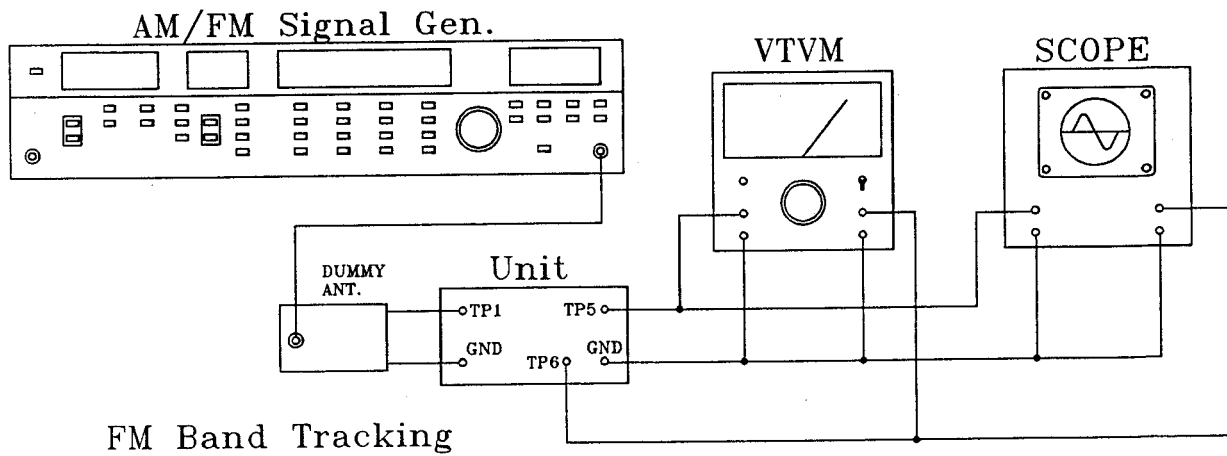
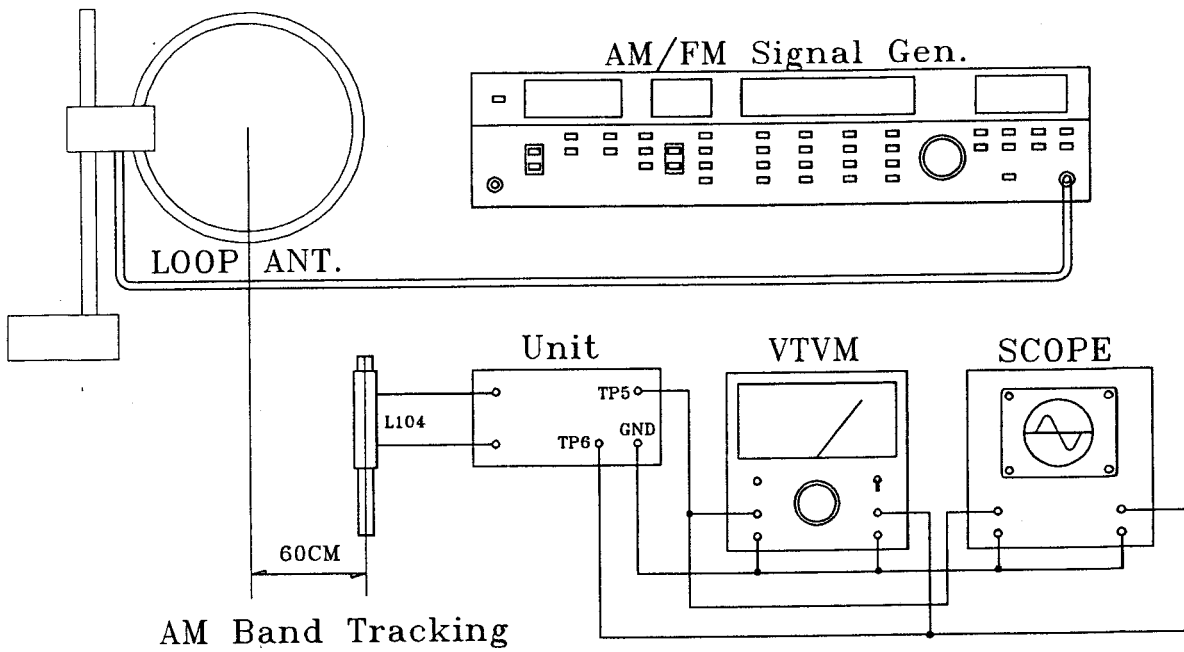
Modulation: 1000Hz 30% input voltage: AC 120V Output impedance: 4 ohms

Step	Alignment Frequency	Test Equipment	Signal In	Signal Out	Alignment	Remark
1	450kHz	1. AM sweep marker scope 2. Power supply	TP3 (Through cer. cap. 1000pF)	TP4	Adjust T102 for maximum output.	1. Push On switch to ON. 2. Select AM Band. 3. Volume at minimum position. 4. Press memory 5 key
2	1710kHz	1. DVM		TP7	Adjust T103 until the DVM reading is 8V.	1. Volume at minimum position. 2. Press memory 5 key
3	600kHz	1. FM signal generator 2. Power supply 3. VTVM 4. Oscilloscope		Speaker	Adjust L104 for maximum output	Press memory 2 key
4	1400kHz	Same as step 3		Speaker	Adjust TC102 for maximum output	Press memory 4 key
5	Repeat Steps 3 and 4 until no further improvement can be made.					

### CASS. SECTION

Input voltage: AC 120V Output impedance: 8 ohms

Step	Alignment Frequency	Test Equipment	Test tape	Signal Out	Alignment	Remark
1	3000Hz	1. Power supply 2. VTVM 3. Wow & Flutter meter 4. Oscilloscope	MTT-111N	Speaker	Adjust R349 until the reading of Wow & Flutter is 3000Hz +/-20Hz	Deck A and Deck B
2	6300Hz	1. Power supply 2. VTVM 3. Oscilloscope	MTT-113N	Speaker	Adjust the head azimuth by rotating the azimuth adjusting screw for maximum output.	Deck A and Deck B
3	80kHz	1. Power supply 2. Frequency counter 3. VTVM		Recording bias output point and ground.	Adjust T301 until the reading of Freq. counter is 80kHz +/-3kHz and VTVM reads 10Vac +/-1V.	Push down REC. switch



## CD ADJUSTMENT PROCEDURE

THE FOLLOWING STEPS SHOULD PERFORMED BEFORE ADJUSTMENT PROCEDURE.

- a. REMOVE THE TURNTABLE BY SLIDING THE GUIDE PLATE OUTWARD. (FIG. 1)
- b. DISASSEMBLE THE BASE COVER BY REMOVED 2 SCREWS.

### CAUTION:

LASER BEAM MAY ALWAYS ACTIVE WHEN THE TURNTABLE REMOVED.  
USE OF CONTROLS FOR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN ANY RESULT IN HAZARDOUS RADIATION EXPOSURE.  
THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

### 1. VCO ADJUSTMENT

- a. CN07 CONNECTED TO POWER SUPPLY, CD TEST DISC SONY YEDS-18 POSITION TO PLAYER AND FASTENED BY MAGNETIC HOLDER. (FIG. 1)
- b. POWER ON & CD ON, PUSH S06 SWITCH IN STOP MODE.
- c. VCO TEST PIN TO CN14, AND ADJUST VR05 LET COUNTER READING AS 4.35MH  $\pm 10$ KHz. (FIG.6) & (FIG.2)
- d. DISCONNECTED THE TEST PIN AFTER ABOVE PROCEDURE.

### 2. RF ADJUSTMENT

- a. RF TEST PIN CONNECTED TO CN14, CD IN PLAY MODE. (FIG. 3)
- b. ADJUST VR02, LET THE WAVEFORM TO MAXIMUM. (FIG. 4) & (FIG. 6)

### 3. TRACK OFF-SET ADJUSTMENT

- a. TRACK OFF-SET TEST PIN CONNECTED TO CN08. (FIG. 6)
- b. ADJUST VR01, LET THE WAVEFORM SHOWN AS A1=A2. (FIG. 5) & (FIG. 6)

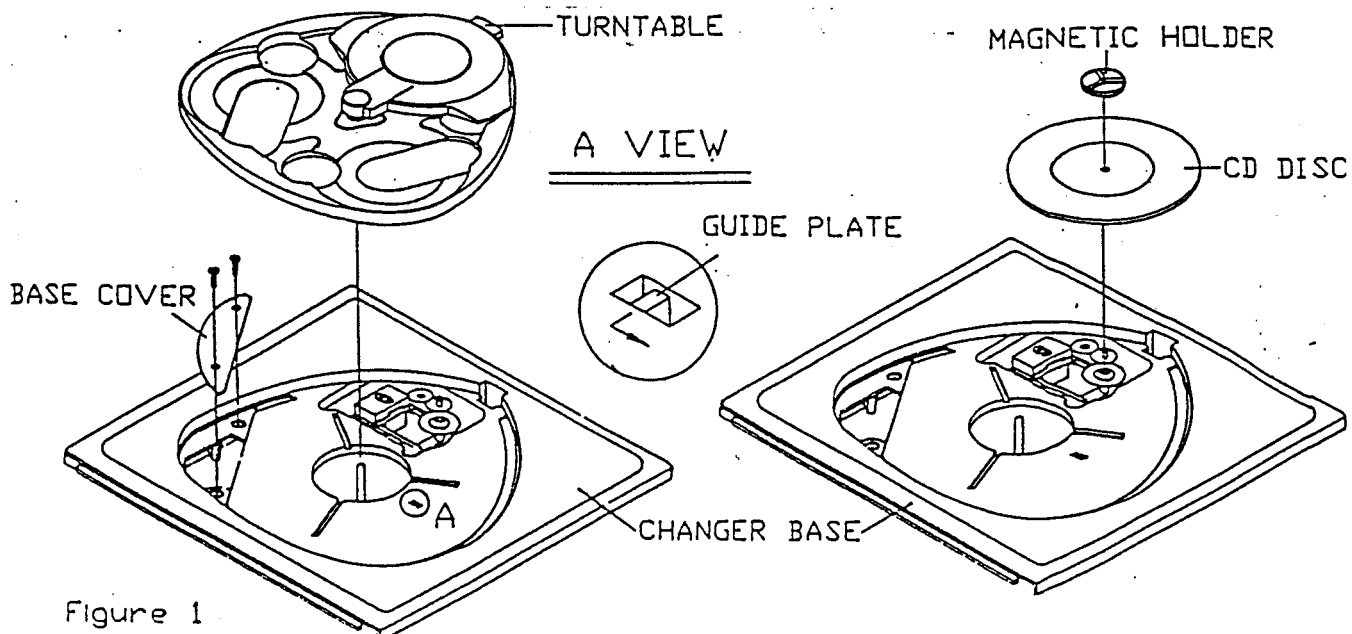
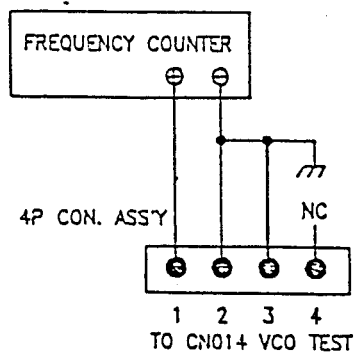
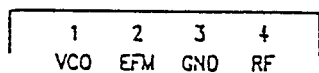


Figure 1

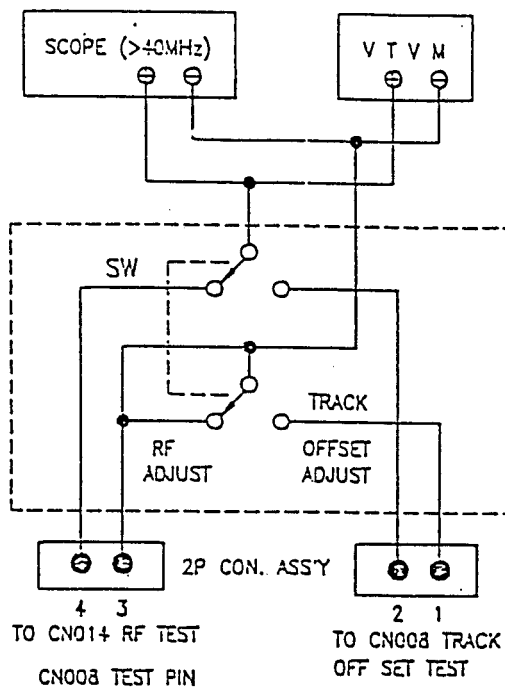


CN014 TEST PIN



NOTE: VCO TEST EFM TO GND.  
 TRACK OFF SET TEST  
 CN008 PIN2 TO GND.

Figure 2



CN008 TEST PIN



TRACK OFF SET TEST PIN

Figure 3

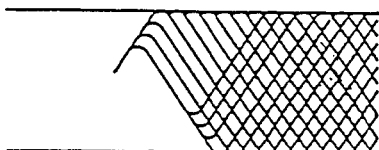


Figure 4

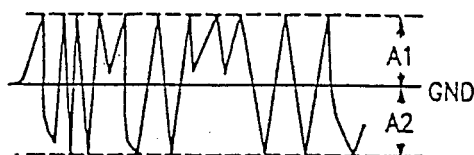
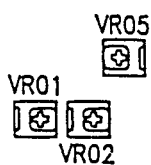
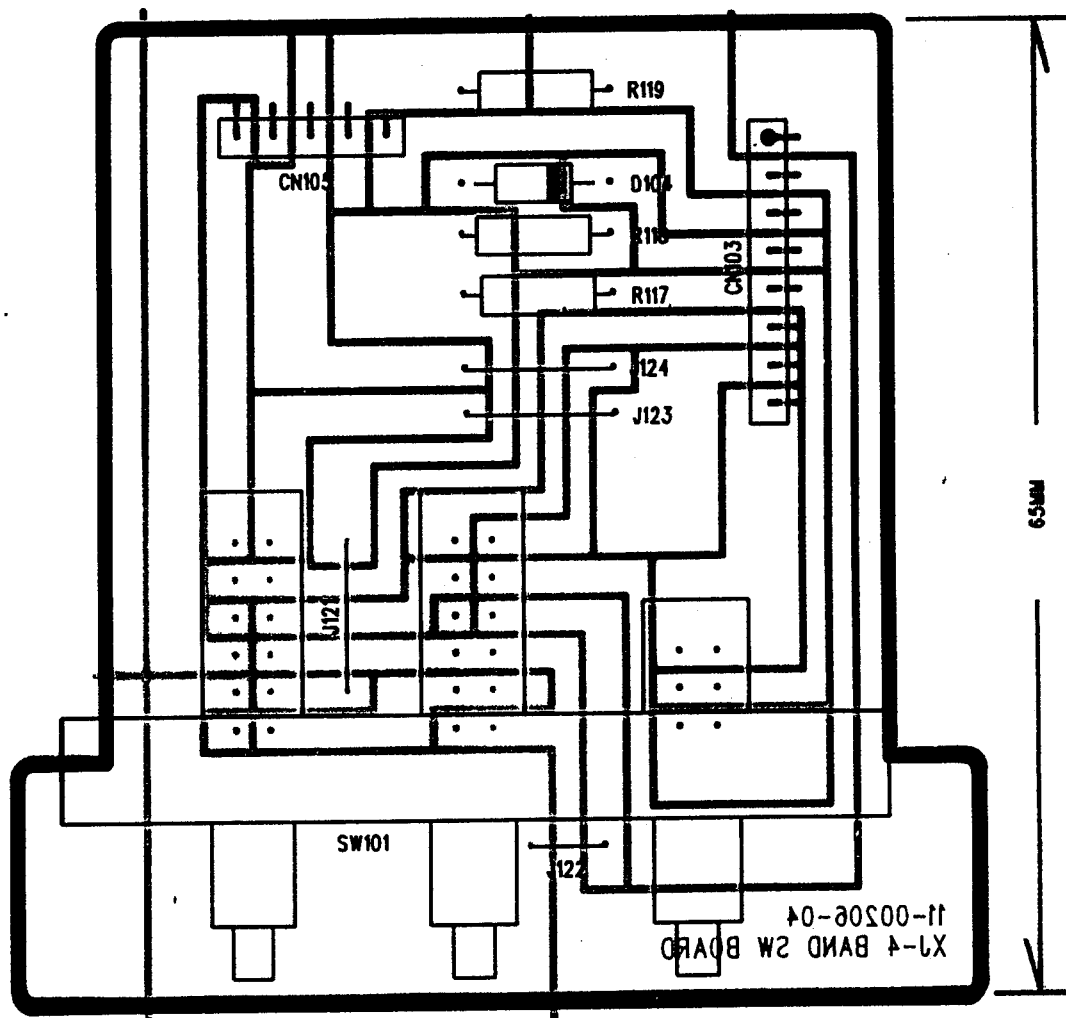


Figure 5

## ADJUSTMENT LOCATIONS

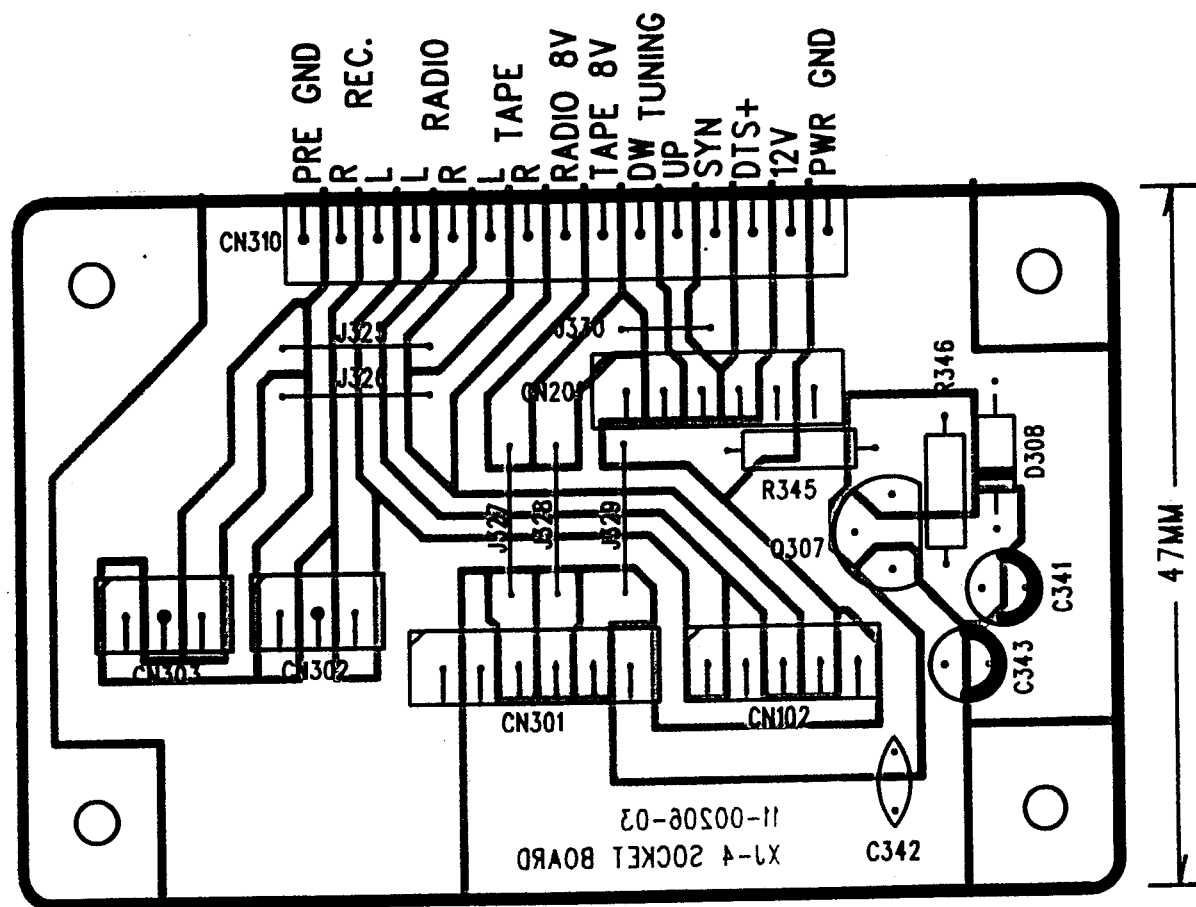




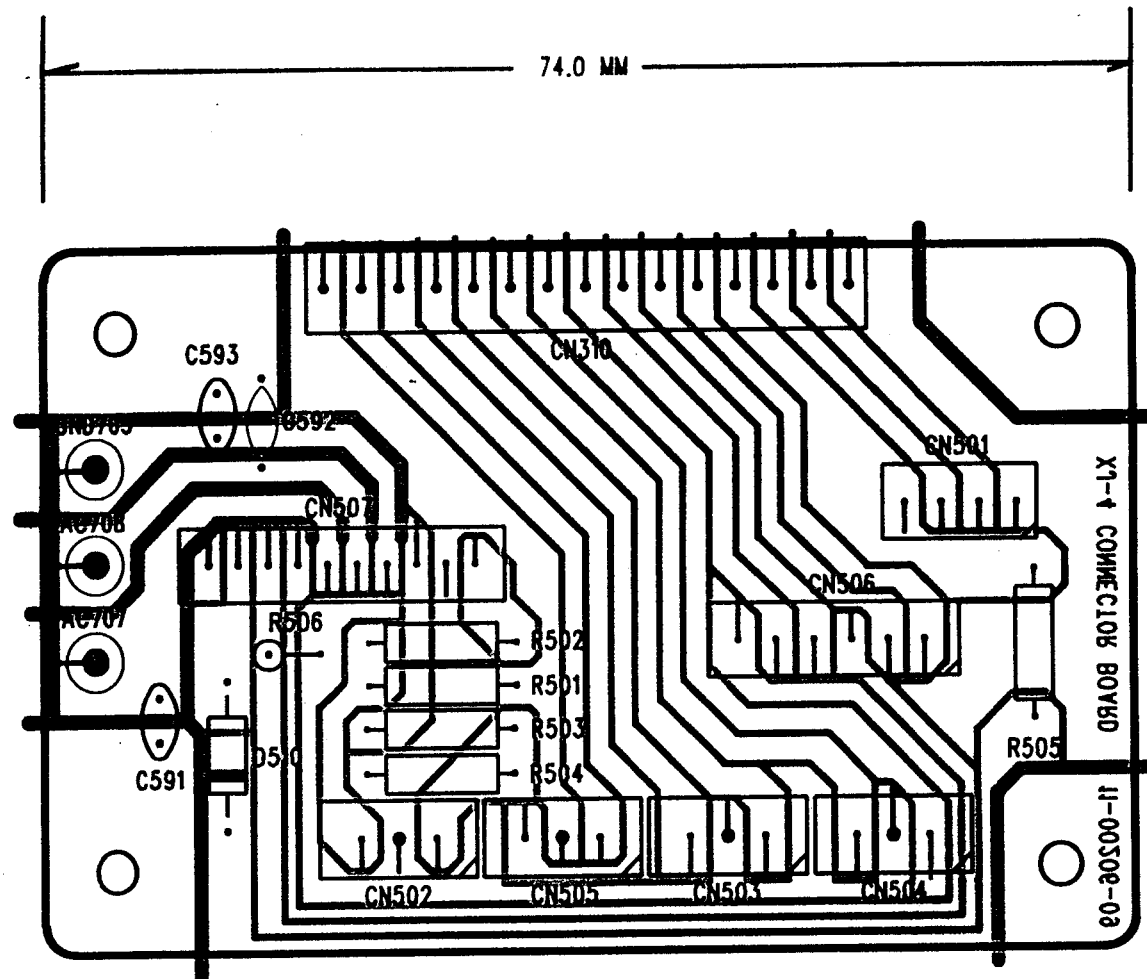
MODEL:XJ-4 BAND SW BOARD  
 SCALE:2:1  
 COMPONENT SIDE  
 REV:00  
 MATERIAL:94HB UL 1.6MM THK  
 NEGATIVE LAYOUT IS SHOWN  
 004.DWG

65MM

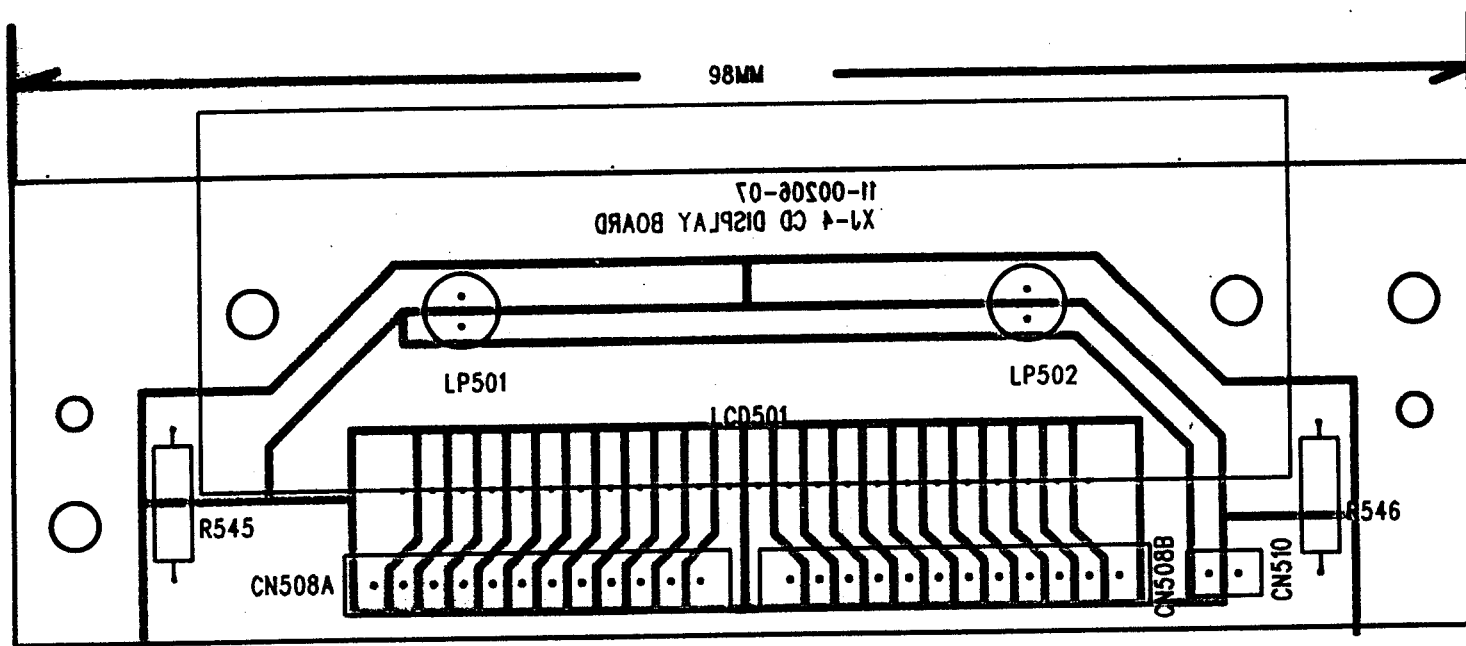
11-00508-04  
 XJ-4 BAND SW BOARD



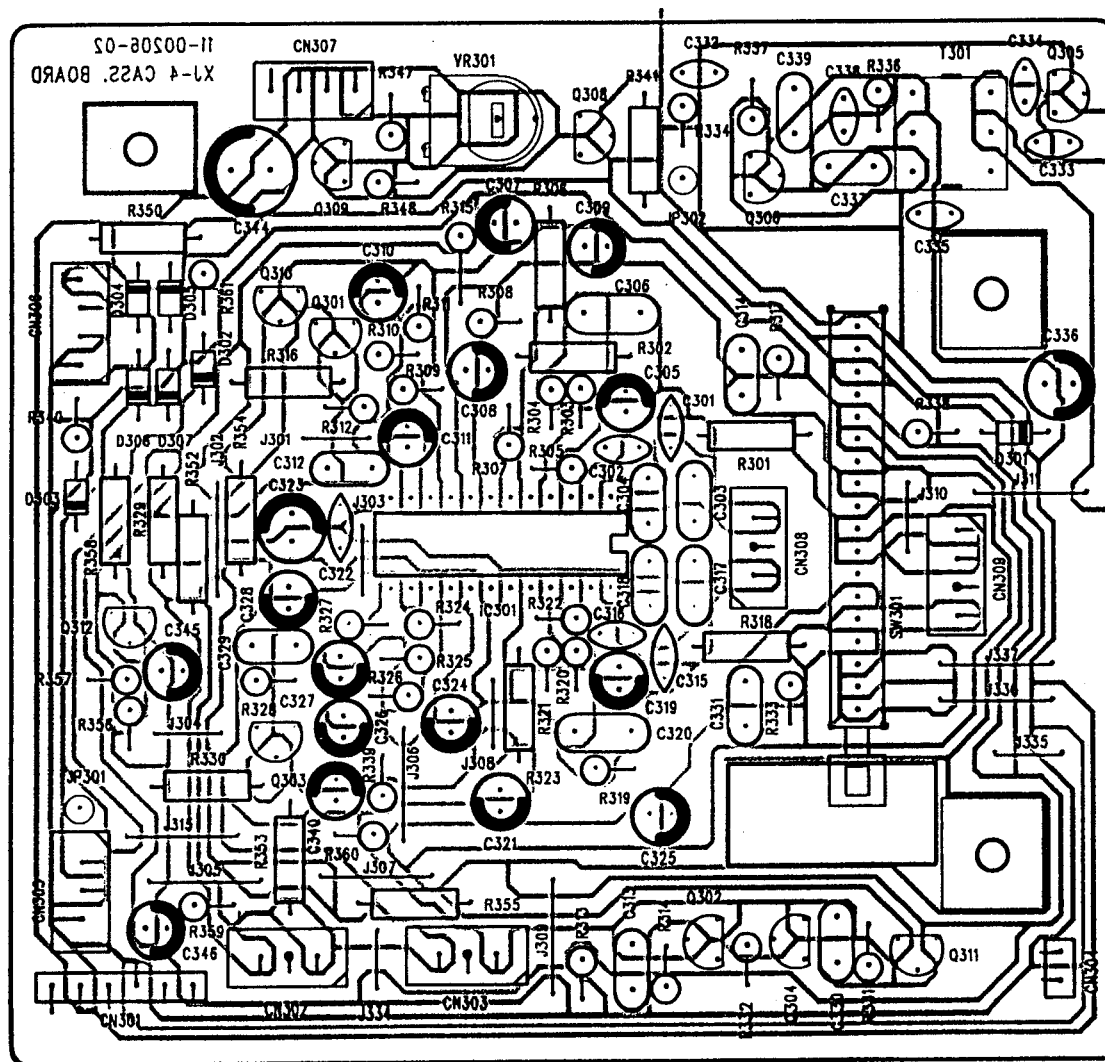
MODEL:XJ-4 SOCKET BOARD  
 SCALE:2:1  
 COMPONENT SIDE  
 NEGATIVE LAYOUT IS SHOWN  
 MATERIAL:94HB UL 1.6MM THK  
 REV:00  
 003.DWG



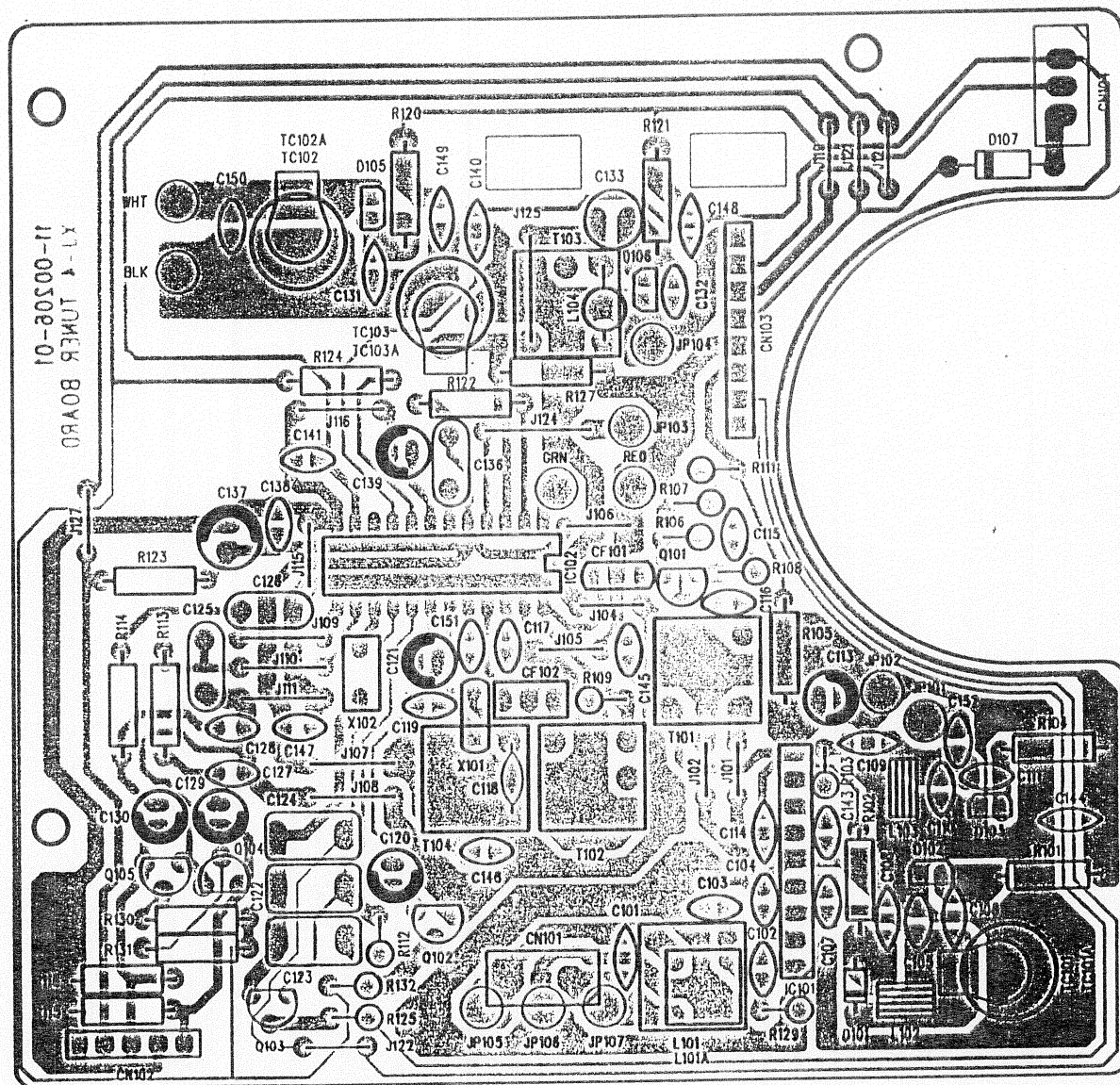
MODEL:XJ-4 CONNECTOR BOARD  
 COMPONENT SIDE  
 NEGATIVE LAYOUT IS SHOWN  
 MATERIAL:UL94HB 1.6MM THK  
 SCALE:2:1  
 REV:00



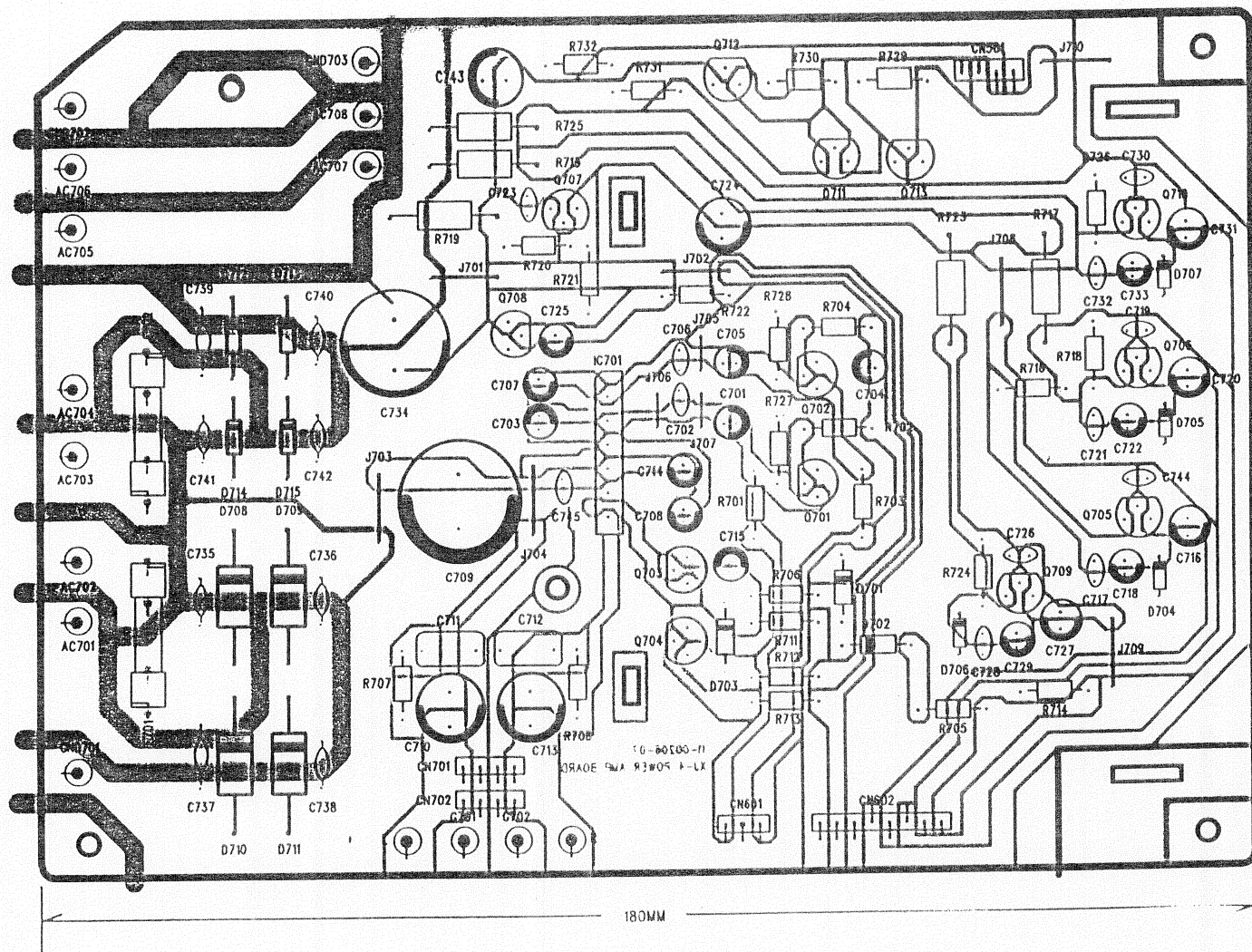
MODEL:XJ-4 CD DISPLAY BOARD  
 COMPONENT SIDE  
 NEGATIVE LAYOUT IS SHOWN  
 MATERIAL:UL94HB 1.6MMTHK  
 SCALE:2:1  
 REV:00  
 009.DWG



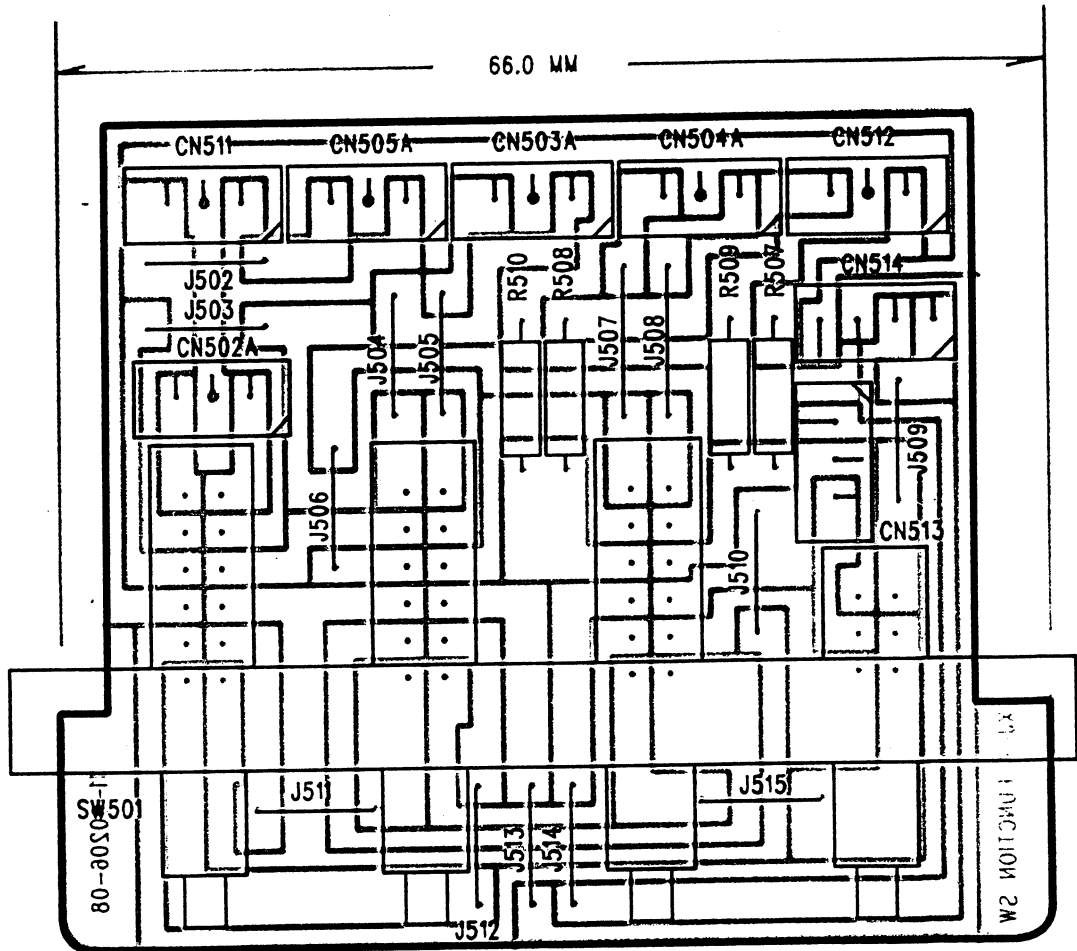
MODEL:XJ-4 CASS. BOARD  
 SCALE:2:1  
 COMPONENT SIDE  
 REV:00  
 MATERIAL:94HB UL 1.6MM THK  
 002.DWG



MODEL:XJ-4 TUNER BOARD  
COMPONENT SIDE  
SCALE: 2:1  
REV: 00  
MATERIAL:94HB 1.6MM THK  
001.DWG

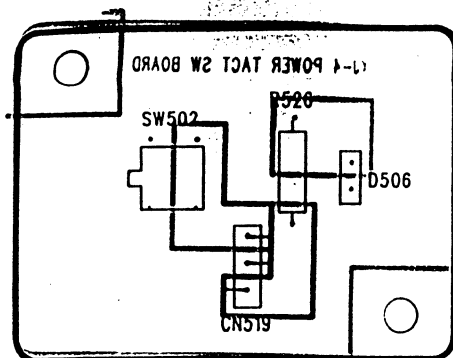


MODEL:XJ-4 POWER AMP BOARD  
 COMPONENT SIDE  
 NEGATIVE LAYOUT IS SHOWN  
 SCALE:2:1  
 MATERIAL:UL94V0 1.6MM THK  
 REV:00  
 006.DWG

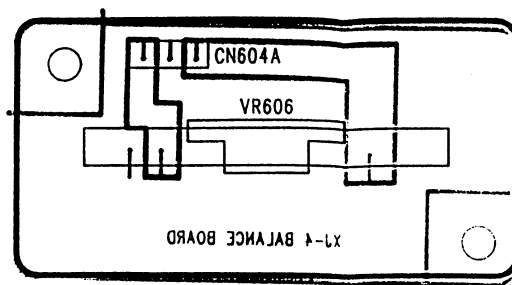


MODEL:XJ-4 FUNCTION SW BOARD

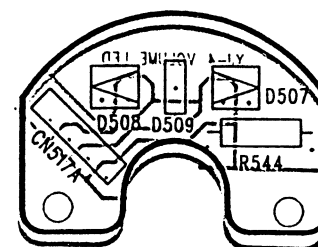
ORIENT POWER ELEC  
COMPONENT SIDE  
NEGATIVE LAYOUT IS  
MATERIAL:UL94HB 1.6  
SCALE:2:1  
REV:00  
010.DWG



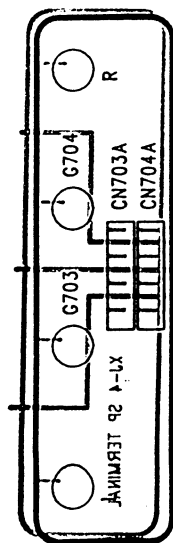
POWER TACT SWITCH BOARD  
UL94HB 1.6MM THK



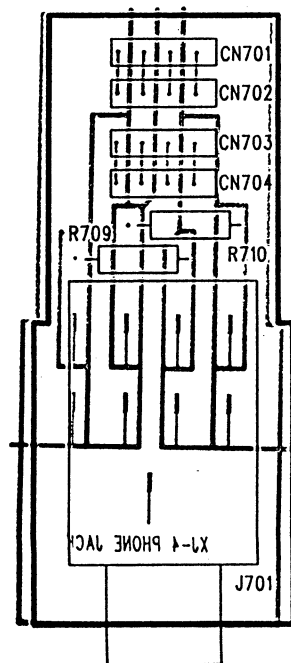
BALANCE BOARD  
UL94HB 1.6MM THK



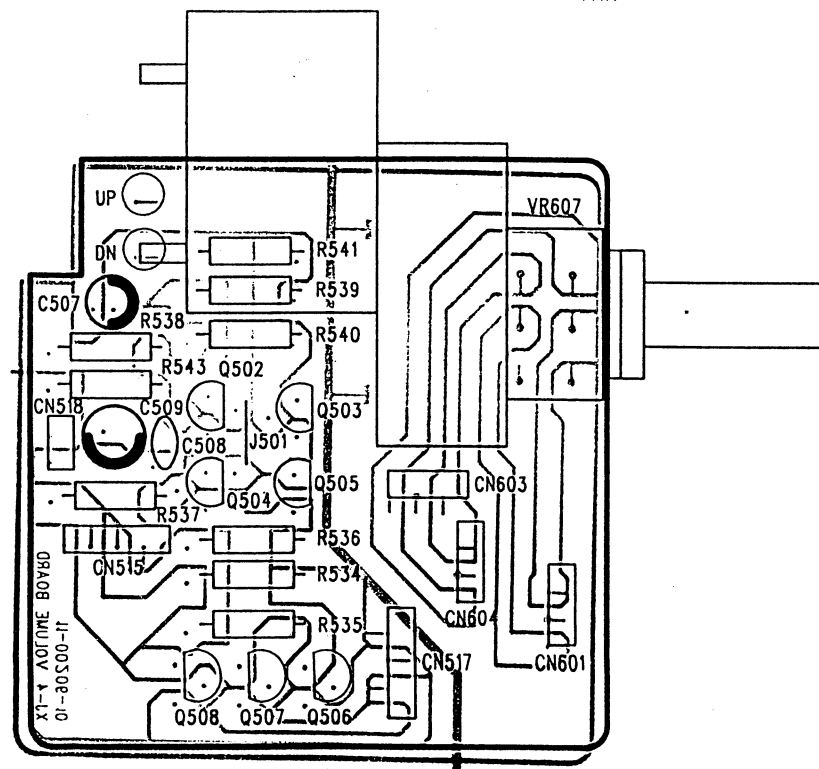
VOLUME LED BOARD  
UL94HB 1.6MM THK



SP TERMINAL BOARD  
UL94V0 1.6MM THK



PHONE JACK BOARD  
UL94V0 1.6MM THK



VOLUME BOARD  
UL94HB 1.6MM THK

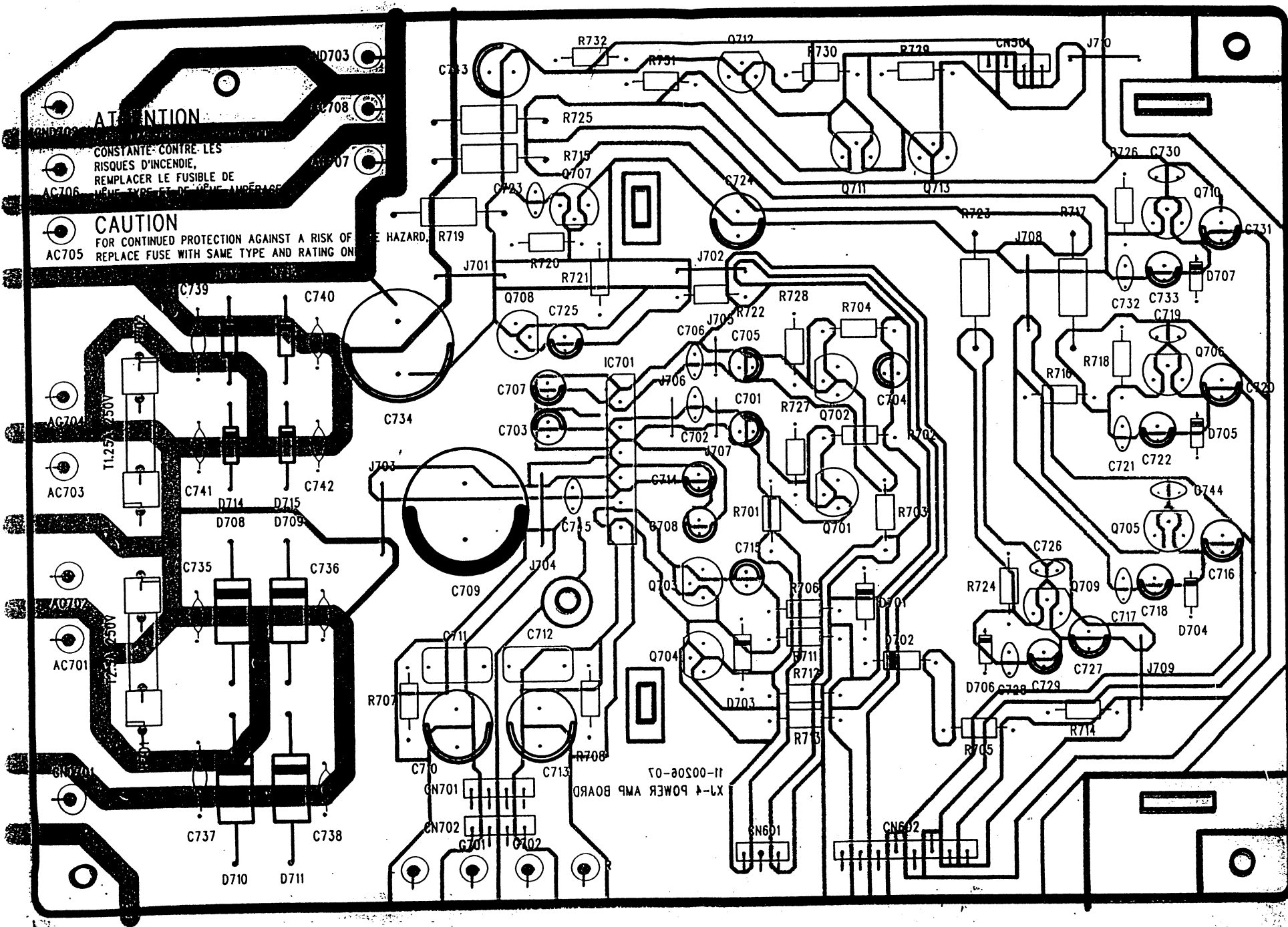
ORIENT POWER ELECTRONICS LTD.  
MODEL:XJ-4  
COMPONENT SIDE  
NEGATIVE LAYOUT IS SHOWN  
REV.00

# ATTENTION

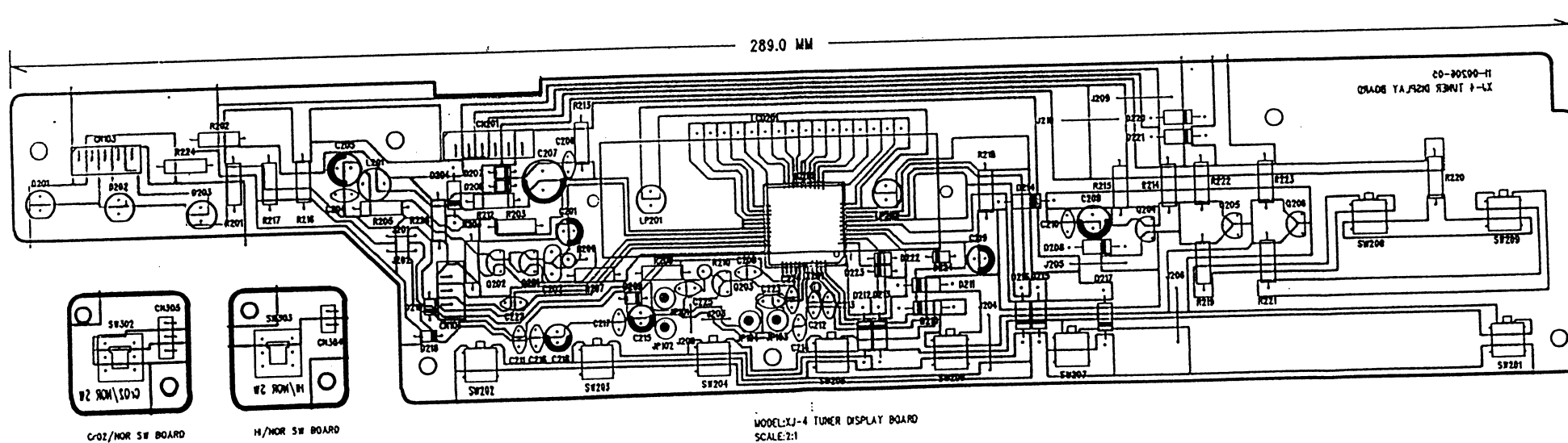
CONSTANTE CONTRE LES  
RISQUES D'INCENDIE.  
REPLACER LE FUSIBLE DE  
MÊME TYPE ET DE MÊME AMBAGE

# CAUTION

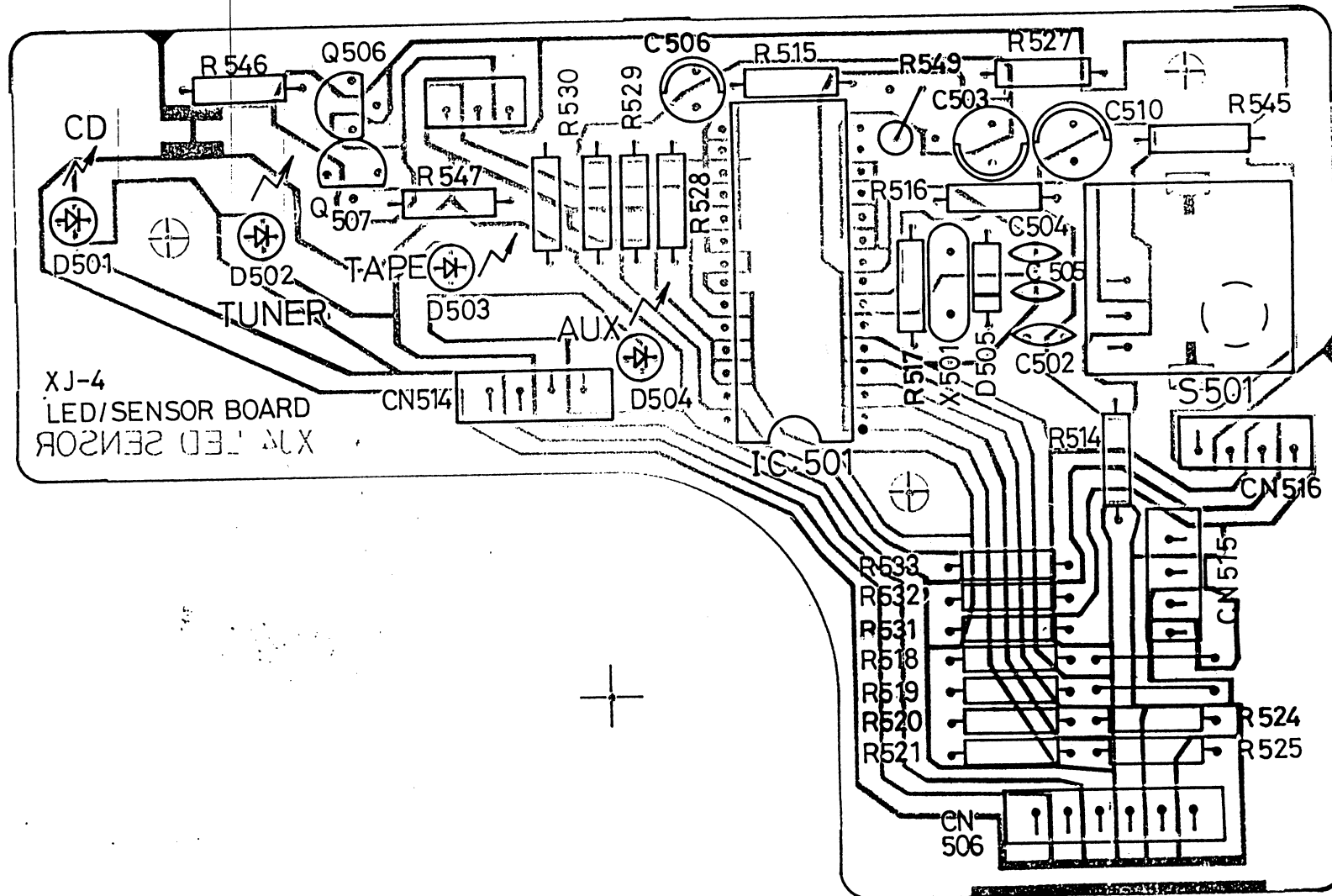
FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE HAZARD,  
REPLACE FUSE WITH SAME TYPE AND RATING ONLY



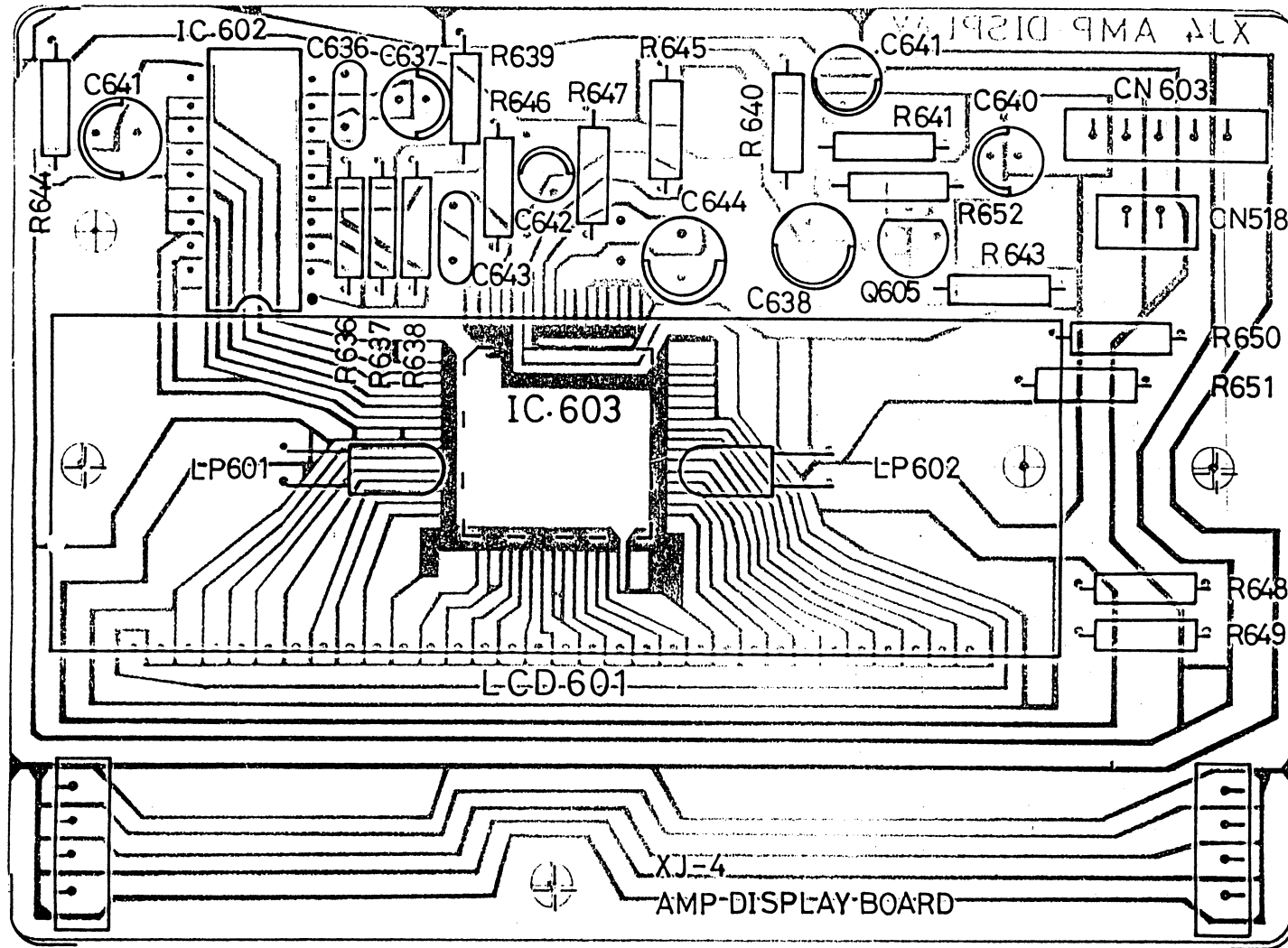




MODEL XJ-4 TUNER DISPLAY BOARD  
SCALE 2:1  
COMPONENT SIDE  
REV:00  
NEGATIVE LAYOUT IS SHOWN  
MATERIAL: 0.4MM UL 16MM TMC  
005.DWG

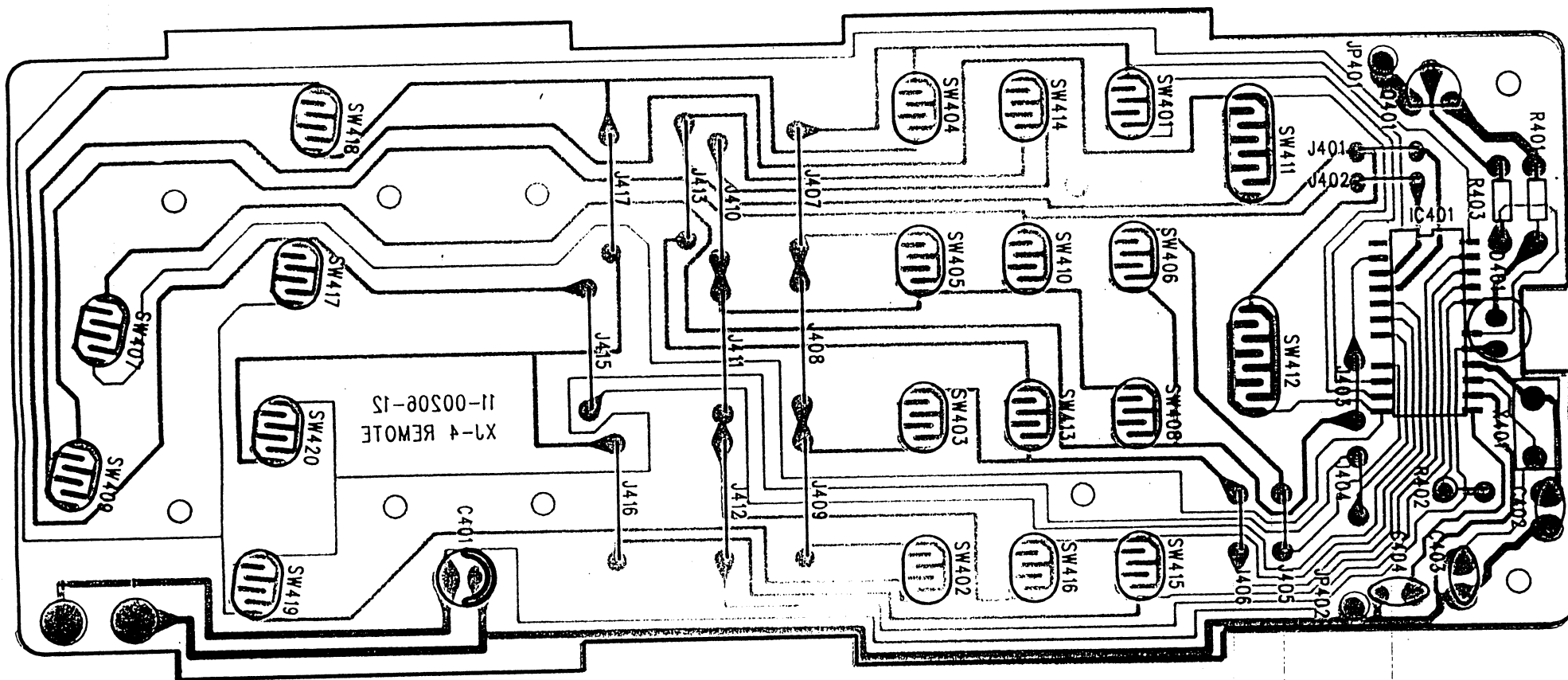


LED/SENSOR  
LED/SENSOR



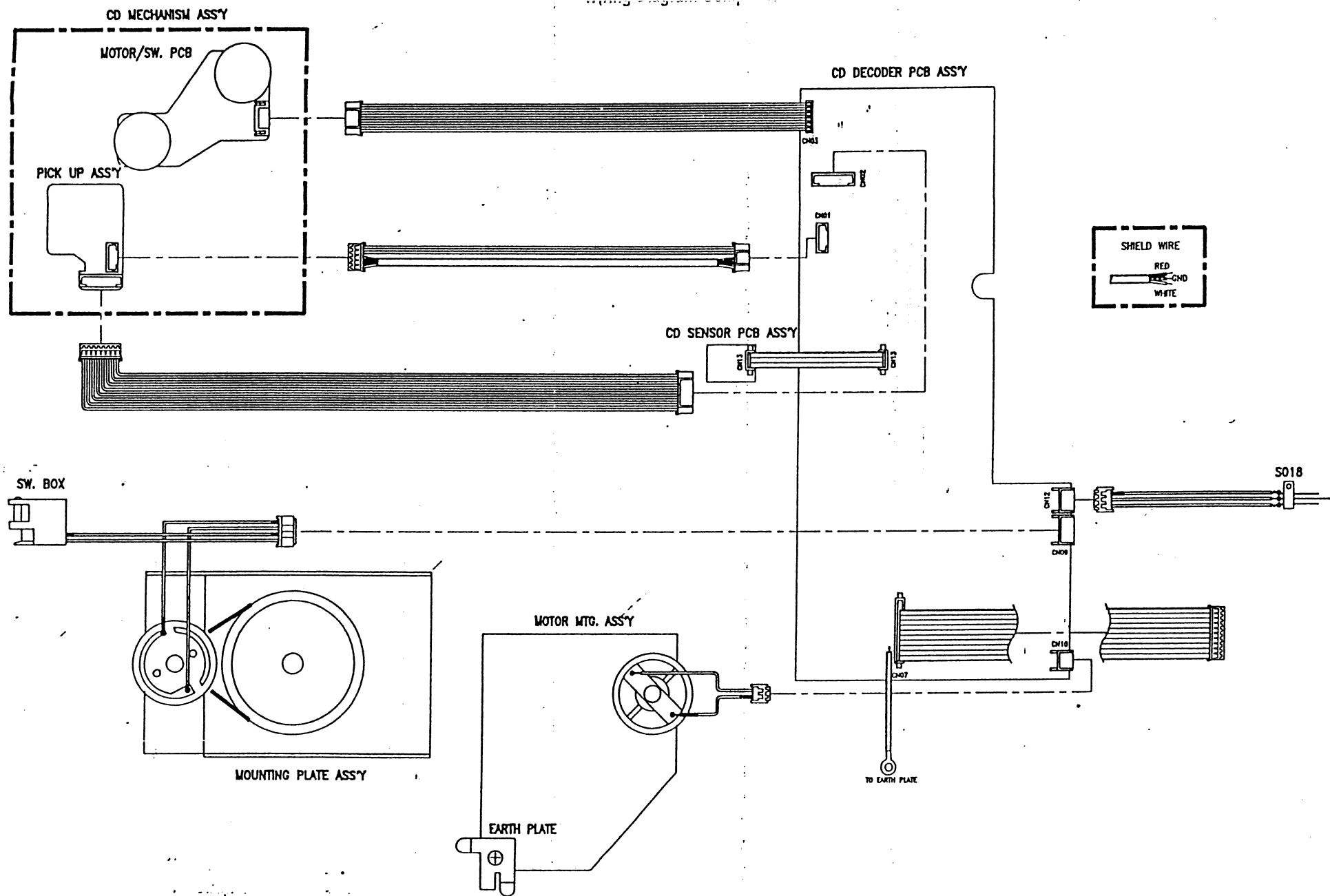
AMP DISPLAY

AMP DISPLAY

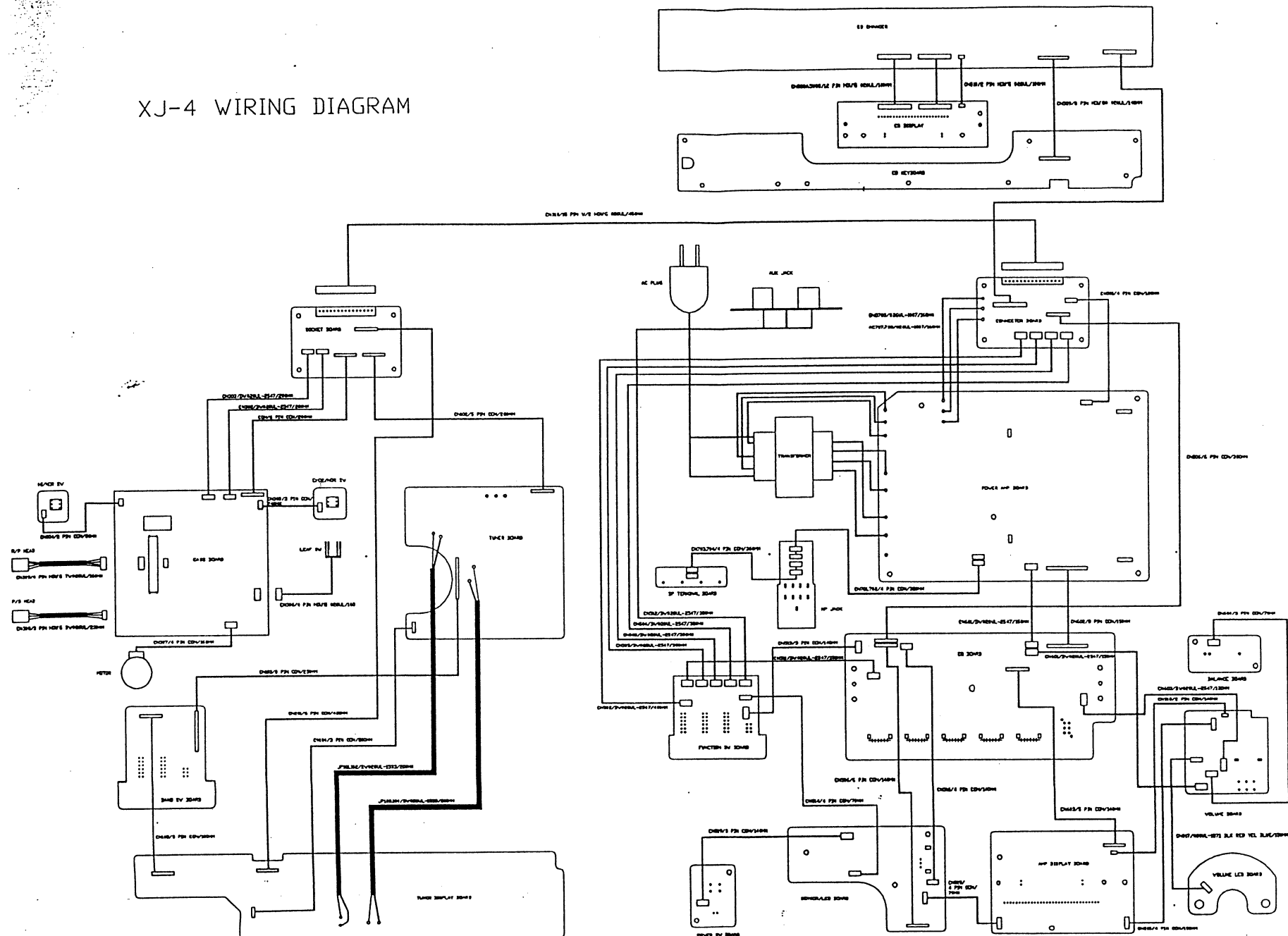


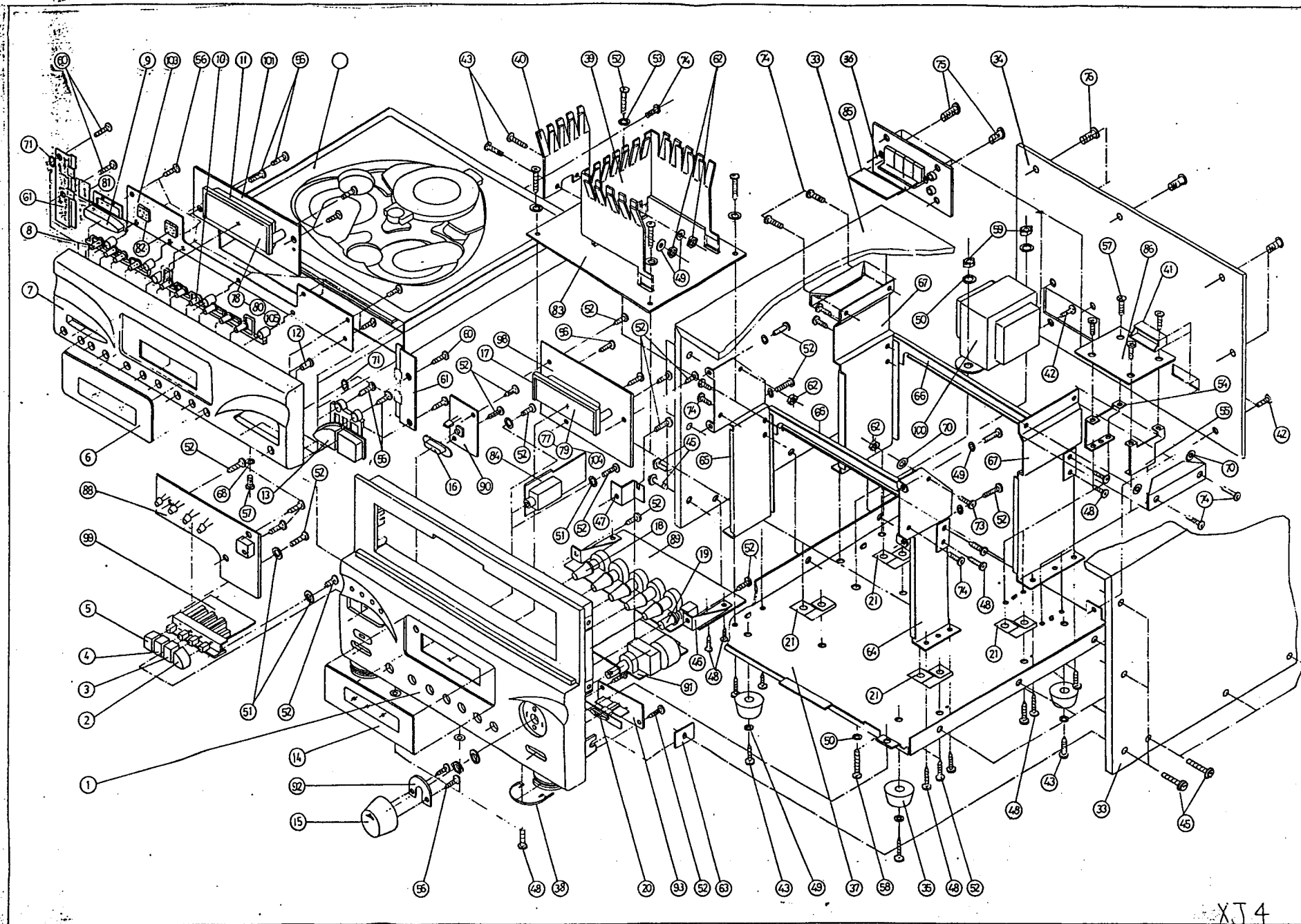
131.0 MM

ORIENT POWER ELECTRONIC LTD.  
 MODEL:XJ-4 REMOTE PCB  
 COMPONENT SIDE  
 SCALE:2:1  
 REV:01  
 MATERIAL:UL94HB 1.6MM THK  
 007.DWG

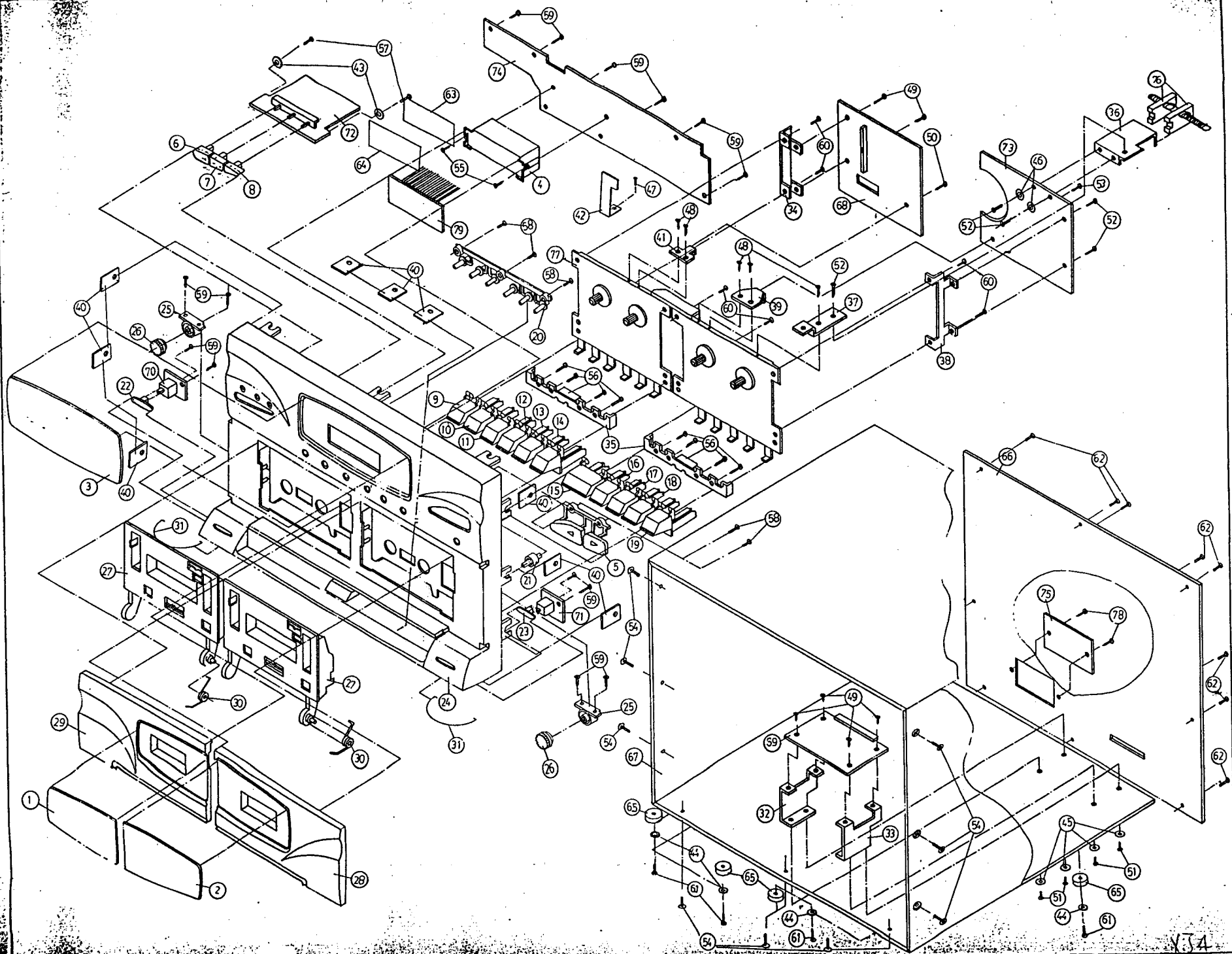


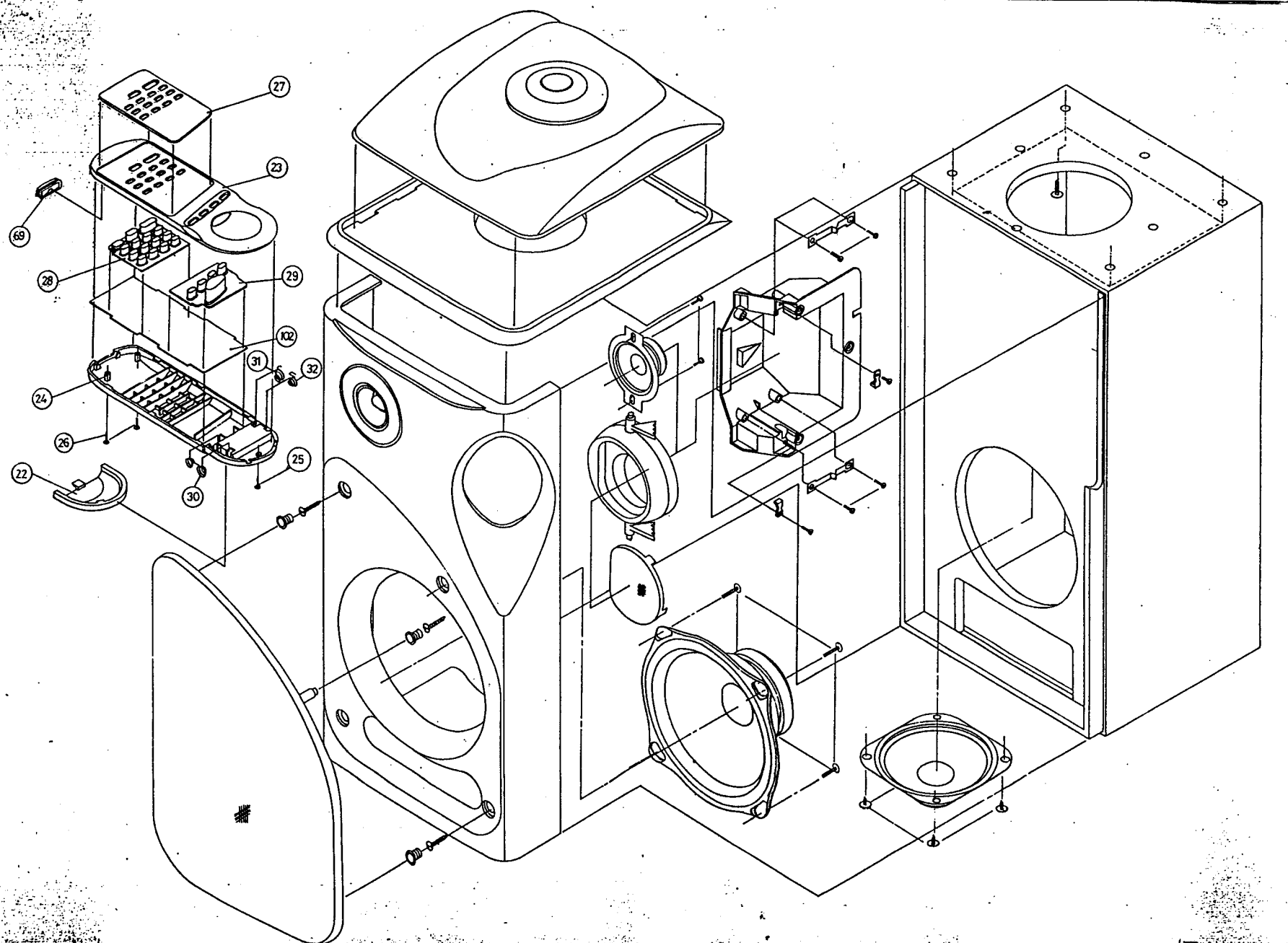
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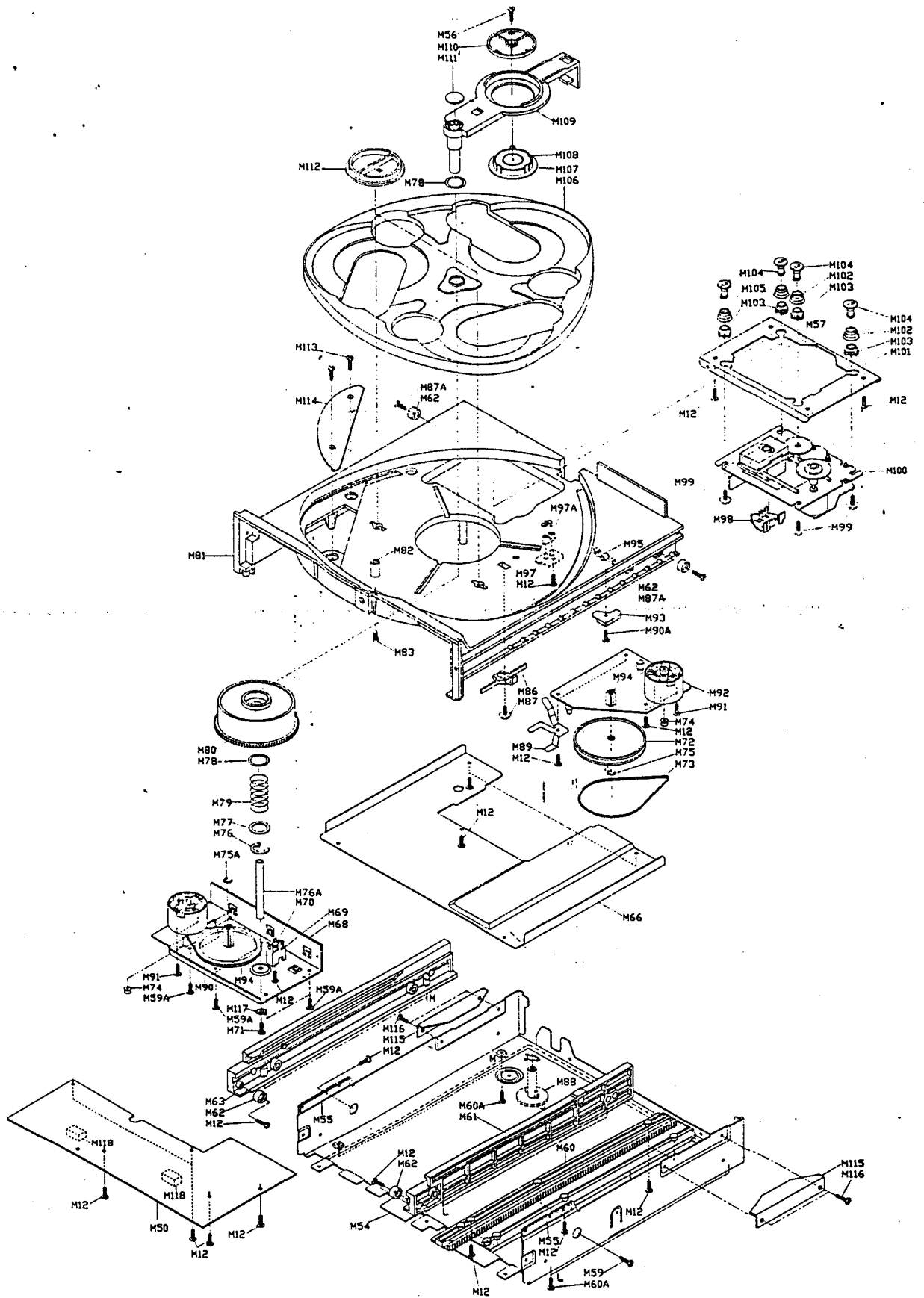


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# Mechanical Exploded View



XJ4

# MECHANICAL PARTS LIST

Ref. No.	Part No.	Description
M12	8741300800	7 (Taptite-P) BID3008 ZN3A
M50	C144233211	CD decoder PCB assembly
M54	200107131J	Bottom chassis
M55	2902078083	Spacer
M56	8742260600	7 (Taptite-P) BID2606 ZN3K
M57	208007131J	Cushion
M59	8741400800	7 (Taptite-P) BID4008 ZN3A
M59A	8711301000	7 (Taptite-P) PAN3010 ZN3A
M60	202517131J	Guide pin plate
M60A	8741301000	7 (Taptite-P) BID3010 ZN3A
M61	202307131J	Side rail (R)
M62	202807131J	Pulley (side)
M63	202207131J	Side rail (L)
M66	200607131J	CD PCB cover
A68	000107131J	Mounting plate assembly
M69	201107131J	Switch box
M70	201307131J	Switch pin
M71	8241300800	2 (Machine-ISO) BID3008 ZN3A
M72	201007131J	Wheel
M73	201207131J	Belt
M74	200507131J	Motor pulley
M75	3130000020	E ring 2.0φ
M75A	3130000025	E ring 2.5φ
M76	3130000080	E ring 8φ
M76A	200807131J	Center spindle
M77	202407131J	Washer
M78	210007131J	Poly washer
M79	207107131J	Clutch spring
M80	200407131J	Cam gear
M81	100207131J	Changer base
M82	201907131J	Sleeve
M83	202007131J	Sleeve spring
M86	206307131J	Guide plate
M87	8761300800	7 (Taptite-P) CUP3008 ZN3A
M87A	8741300600	7 (Taptite-P) BID3006 ZN3A
M88	100204JD3D	Lock lever
M89	206407131J	Earth plate
M90	207907131J	Belt 58φ
M90A	8741301200	7 (Taptite-P) BID3012 ZN3A
M91	8141260300	1 (Machine-JIS) BID2603 ZN3A
M92	000317131J	Motor MTG. assembly
M93	204307131J	Lever plate
M94	203307131J	Gear wheel
M95	204107131J	Shaft (lever switch)
M97	C044233220	CD sensor PCB assembly

Ref. No.	Part No.	Description
M97A	206607131J	2 LED holder
M98	205607131J	Wire control holder
M99	8761300600	7 (Taptite-P) CUP3006 ZN3A
M100	C486040404	CD mechanism CDK90V1HYN
M101	204707131J	CD plate
M102	205907131J	Spring (white color)
M103	205407131J	CDK90 cushion
M104	203807131J	CDK90 holder
M105	205807131J	Spring (black color)
M106	100117131J	Turntable
M107	201707131J	Magnetic holder
M108	2105039115	Magnetic
M109	000207131J	Arm assembly
M110	201607131J	Magnetic cover
M111	102507131J	Screw cap
M112	202107131J	Transit lock
M113	8742260800	7 (Taptite-P) BID2608 ZN3K
M114	203407131J	Main base cover,
M115	208207131J	CD side bracket
M116	8941300600	9 (Taptite-B) BID3006 ZN3A
M117	3023110001	W gear-B-1-ZN3A
M118	2900078083	Cushion

# Replacement Parts List

Ref. No.	Part No.	Description
RESISTORS		
Note: All resistors are carbon film, $\pm 5\%$ and 1/4 watt, unless otherwise noted.		
R01	4050110252	1K ohm
R02	4050112352	12K ohm
R03	4050122352	22K ohm
R04	4050110052	10 ohm
R05	4050110252	1K ohm
R06	4050147352	47K ohm
R07	4050115352	15K ohm
R08	4050115352	15K ohm
R09	4050168252	6.8K ohm
R10	4050112352	12K ohm
R11	4050115352	15K ohm
R12	4050168252	6.8K ohm
R13	4050122352	22K ohm
R14	4050122352	22K ohm
R15	4050156352	56K ohm
R16	4050151452	510K ohm
R17	4050112452	120K ohm
R18	4050110452	100K ohm
R19	4050110452	100K ohm
R20	4050110452	100K ohm
R21	4050115352	15K ohm
R22	4050168252	6.8K ohm
R23	4050110452	100K ohm
R24	4050110452	100K ohm
R25	4050151452	510K ohm
R26	4050133252	3.3K ohm
R27	4050112452	120K ohm
R28	4050110452	100K ohm
R29	4050110552	1M ohm
R30	4050110452	100K ohm
R31	4050110452	100K ohm
R32	4050122352	22K ohm
R33	4050110352	10K ohm
R34	4050110452	100K ohm
R35	4050110352	10K ohm
R36	4050110352	10K ohm
R37	4050168252	6.8K ohm
R38	4050110252	1K ohm
R42	4050110252	1K ohm
R43	4050139152	390 ohm

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
R44	4050139152	390 ohm
R45	4050147252	4.7K ohm
R46	4050110352	10K ohm
R47	4050139152	390 ohm
R48	4050139152	390 ohm
R49	4050147252	4.7K ohm
R50	4050147252	4.7K ohm
R51	4050122252	2.2K ohm
R52	4050115352	15K ohm
R53	4050147352	47K ohm
R54	4050110352	10K ohm
R55	4050122352	22K ohm
R56	4050122352	22K ohm
R57	4050110352	10K ohm
R58	4050122352	22K ohm
R62	4050182152	820 ohm
R63	4050110352	10K ohm
R64	4050110352	10K ohm
R65	4050182152	820 ohm
R66	4050147252	4.7K ohm
R67	4050122252	2.2K ohm
R68	4050147252	4.7K ohm
R71	4050115152	150 ohm
R72	4050122352	22K ohm
R78	4050122352	22K ohm
R79	4050122352	22K ohm
R80	4050122352	22K ohm
R81	4050122352	22K ohm
R81L,81R	4050122252	2.2K ohm
R82	4050147252	4.7K ohm
R82L,82R	4050122252	2.2K ohm
R83	4050110352	10K ohm
R83L,83R	4050122252	2.2K ohm
R86	4050147252	4.7K ohm
R87	4050110352	10K ohm
R87L,87R	4050110252	1K ohm
R88	4050110352	10K ohm
R88L,88R	4050110452	100K ohm
R89	4050110352	10K ohm
R89L,89R	4050147252	4.7K ohm
R90L,90R	4050110352	10K ohm
R91L,91R	4050168152	680 ohm
R92L,92R	4050110352	10K ohm
R93	4050110352	10K ohm
R94	4050110352	10K ohm

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
R95	4050110352	10K ohm
R96	4050110352	10K ohm
R98	4050110052	10 ohm
FR01,02	4180447857	.47 ohm, 1/4W Fuse

# CAPACITORS

Note: All capacitors are multi-layer ceramic type, unless otherwise noted.  
C=±0.25pF D=±0.5pF J=±5% K=±10% M=±20% N=±30% Z=±80/-20%

C01	7307110315	.01uF/16V	(K)
C02	7306610445	.1uF/50V	(Z)
C03	5114333550	.033uF	(J) Mylar
C04	5154101210	100uF/10V	(M) Electrolytic
C05	5114472550	.0047uF	(J) Mylar
C06	7307110315	.01uF/16V	(K)
C07	7307110315	.01uF/16V	(K)
C08	5154478250	.47uF/50V	(M) Electrolytic
C09	7306956055	56pF/50V	(J)
C10	5154101210	100uF/10V	(M) Electrolytic
C11	5114473550	.047uF	(J) Mylar
C12	5114472550	.0047uF	(J) Mylar
C13	7306547115	470pF/50V	(K)
C14	7306610445	.1uF/50V	(Z)
C15	5114333550	.033uF	(J) Mylar
C16	5154100225	10uF/25V	(M) Electrolytic
C17	7306610445	.1uF/50V	(Z)
C18	5114333550	.033uF	(J) Mylar
C19	5154101210	100uF/10V	(M) Electrolytic
C21	5154220216	22uF/16V	(M) Electrolytic
C23	5114103550	.01uF	(J) Mylar
C24	7308622345	.022uF/25V	(Z)
C25	7308622345	.022uF/25V	(Z)
C26	7306510215	.001uF/50V	(K)
C27	5154478250	.47uF/50V	(M) Electrolytic
C28	5154101210	100uF/10V	(M) Electrolytic
C29	7306610445	.1uF/50V	(Z)
C30	7307110315	.01uF/16V	(K)
C31	5114333550	.033uF	(J) Mylar
C32	5154478250	.47uF/50V	(M) Electrolytic
C33	7306610445	.1uF/50V	(Z)
C34	7306610445	.1uF/50V	(Z)
C35	5154101210	100uF/10V	(M) Electrolytic
C36	7306922055	22pF/50V	(J)
C37	7306922055	22pF/50V	(J)

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
C38	5154101210	100uF/10V (M) Electrolytic
C39	5154101210	100uF/10V (M) Electrolytic
C40	5154101210	100uF/10V (M) Electrolytic
C41	5154101210	100uF/10V (M) Electrolytic
C44	5154471210	470uF/10V (M) Electrolytic
C45	5154471210	470uF/10V (M) Electrolytic
C46	5154222216	2200uF/16V (M) Electrolytic
C47	5154222216	2200uF/16V (M) Electrolytic
C48	7308622345	.022uF/25V (Z)
C49	7308622345	.022uF/25V (Z)
C51	5154101210	100uF/10V (M) Electrolytic
C52	7308622345	.022uF/25V (Z)
C53	5154101210	100uF/10V (M) Electrolytic
C54	5154220216	22uF/16V (M) Electrolytic
C55	5114472550	.0047uF (J) Mylar
C58	7306510215	.001uF/50V (K)
C62	7307110315	.01uF/16V (K)
C63	5154101216	100uF/16V (M) Electrolytic
C64	5154101216	100uF/16V (M) Electrolytic
C65	5154101210	100uF/10V (M) Electrolytic
C66	5154101210	100uF/10V (M) Electrolytic
C81L, 81R	7307839215	.039uF/16V (K)
C82L, 82R	7306527115	270pF/50V (K)
C83L, 83R	5114153550	.015uF (J) Mylar
C85L, 85R	7306510215	.001uF/50V (K)
C86L, 86R	5154100225	10uF/25V (M) Electrolytic
C88L, 88R	5154100225	10uF/25V (M) Electrolytic
C89L, 89R	5114153550	.015uF (J) Mylar

#### INTEGRATED CIRCUITS

IC01	415C01081M	CXA1081M
IC02	415C010821	CXA1082BQ
IC03	415C01167Q	CXD1167Q
IC04	4151753083	UPD75308GF-K13
IC05	4151063767	UPD6376GS
IC07	415904558L	NJM4558L
IC09	415G00520D	PST-520D

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
TRANSISTORS		
Q01	410000952L	2SA952L
Q02	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q03	410000952L	2SA952L
Q04	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q05	410000952L	2SA952L
Q06	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q07	410000952L	2SA952L
Q08	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q09	410000952L	2SA952L
Q10	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q11	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q12	410000733P	2SA733P
	or 410000733Q	2SA733Q
Q14	410030882P	2SD882P
	or 410030882Q	2SD882Q
Q15	410010772P	2SB772P
	or 410010772Q	2SB772Q
Q16	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q17	410000733P	2SA733P
	or 410000733Q	2SA733Q
Q18	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q19	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q20	410000952L	2SA952L
Q21	410000733P	2SA733P
	or 410000733Q	2SA733Q
Q22	410000952L	2SA952L
Q23	410022001L	2SC2001L
	or 410022001M	2SC2001M
Q24	410000733P	2SA733P
	or 410000733Q	2SA733Q

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
Q25	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q26	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q27	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q28	410020945P	2SC945P
	or 410020945Q	2SC945Q
Q33	410000733P	2SA733P
	or 410000733Q	2SA733Q
XTL01	410098467M	Crystal 8.4672MHz

See special handling techniques for electrostatically sensitive devices as described in section of this service manual.

#### DIODES

PH01	41200ST7LD	ST-7L
	or 412000ST8L	ST-8L
D01	4120901760	1SS176
D06	412152056J	RD5.6JSB2, ZENER
	or 412153056J	RD5.6JSB3, ZENER
D07	412152056J	RD5.6JSB2, ZENER
	or 412153056J	RD5.6JSB3, ZENER
D08	4138104002	IN4002L
D09	4138104002	IN4002L
D10	4138104002	IN4002L
D11	4138104002	IN4002L
D13	41200EL7LD	EL-7L
	or 412000EL8L	EL-8L
D14	412152100J	RD10JSB2, ZENER
	or 412153100J	RD10JSB3, ZENER
D15	412152100J	RD10JSB2, ZENER
	or 412153100J	RD10JSB3, ZENER
D17	4120901760	1SS176
D19	412151051J	RD5.1JSB1, ZENER

#### SEMI-FIXED RESISTOR

VR01	5226203177	20KX
VR02	5226103177	10KX
VR05	5226202177	2KX

\* Please check your alteration notice before ordering parts. \*

Ref. No.	Part No.	Description
OTHERS		
L01-03	4325010093	Peaking coil 10 uH "K"
S017	4400000168	LEAF SW. MLS-1
E1	4020100190	Turntable motor MMN-6E9D1
E2	4144233220	CD sensor PCB (Blank)
E3	4490300261	Wire holder 3P20
E4	4490201002	Male connector EH 2P
E5	4490401002	Male connector EH 4P
E6	4490501004	Male connector PH 5P
E7	4490801004	Male connector PH 8P
E8	4491201005	Male connector PH 12P
E9	4490801005	Male connector PH 8P
E10	4490201005	Male connector PH 2P
E11	449R201005	Male connector PH 12P (RED)
E12	4490201003	Male connector EH 2P
E13	4490301003	Male connector EH 3P
E14	4490401003	Male connector EH 4P
E15	4491200261	Wire holder 12P20
E16	4144233210	CD decoder PCB (Blank)
E17	4110440199	LCD display HLC8132-012312
E18	4151612576	Integrated circuit UPD6125AG-876

\* Please check your alteration notice before ordering parts. \*

# Wire List

Ref. No.	Part No.	Description
CN001	C488051413	5P connector assembly 350m/m
CN002	C488081425	8P connector assembly 350m/m
CN03	C48D064011	6P connector assembly 400m/m
CN07	C488101562	10P connector assembly 750m/m
CN009	C488040583	4P connector assembly 300/200 4.5/0
CN010	C488020490	2P connector assembly 200 4.5/0
CN12	C488030489	3P connector assembly 150 4.5/0
CN13	5410324040	FTW (2.0)3 BLK 240 4.5/4.5
CN15	4590200105	Earth terminal assembly BLK-200

\* Please check your alteration notice before ordering parts. \*

1	XJ-4 AMP FRONT PANEL	1	60-00206-10
2	XJ-4 PUSH SWITCH BUT(AUX)	1	53-00206-26
3	XJ-4 PUSH SWITCH BUT (TAPE)	1	53-00206-25
4	XJ-4 PUSH SWITCH BUT (TUNER)	1	53-00206-24
5	XJ-4 PUSH SWITCH BUT (CD)	1	53-00206-23
6	XJ-4 CD DISPLAY LENS	1	43-00206-21
7	XJ-4 CD FRONT PANEL	1	60-00206-09
8	XJ-4 CD PUSH BUT (SEARCH)	1	53-00206-18
9	XJ-4 CHANGE DISC PUSH BUTTON	1	53-00206-27
10	XJ-4 CD PUSH BUTTON (FUNT)	1	53-00206-17
11	XJ-4 CD DISPLAY BRACKET 'WHT'	1	48-00206-02
12	XJ-4 CD PUSH BUTTON (EJECT)	1	53-00206-19
13	XJ-4 PLAY/STOP BUTTON	1	53-00206-28
14	XJ-4 AMP DISPLAY LENS	1	43-00206-22
15	XJ-4 REMMOTE VOLUME KNOB	1	51-00206-01
16	XJ-4 POWER KNOB	1	52-00206-03
17	XJ-4 AMP DISPLAY BRACKET 'WHT'	1	48-00206-03
18	XJ-4 AMP ROTATY KNOB	5	51-00206-00
19	XJ-4 DYNAMIC BASS BOOST	1	52-00206-05
20	XJ-4 BALANCE KNOB	1	52-00206-04
21	XJ-4 PCB BRACKET	4	48-00206-06
22	XJ-4 R/C BATTERY COVER	1	58-00206-02
23	XJ-4 R/C FRONT CABINET	1	60-00206-12
24	XJ-4 R/C BACK CABINET	1	61-00206-02
25	SCREW d2x6 KH/ST BLK/ZN (HD=4)	1	40-12006-22A
26	SCREW d2x12 KH/ST 'BLK' (HD=4)	2	40-12012-22A
27	XJ-4 REMOTE HANDSET INLAY	1	43-00206-27
28	XJ-4 R/C RUBBER KEY A	1	81-00206-02
29	XJ-4 R/C RUBBER KEY B	1	81-00206-03
30	XJ-4 R/C BATTERY SPRING '+/-'	1	74-00206-02
31	XJ-4 R/C BATTERY SPRING '-'	1	74-00206-03
32	XJ-4 R/C BATTERY SPRING '+'	1	74-00206-04
33	XJ-4 WOODEN CASE (CD)	1	82-00206-05
34	XJ-4 REAR BOARD (CD) (NEW)	1	82-00206-06
35	XJ-4 RUBBER FOOT d20x8MM	4	81-00206-01
36	XJ-4 TERMINAL PLATE 'BLK'	1	12-00206-01
37	XJ-4 METAL BASE	1	39-00206-05
38	XJ4 LEG DECORATION WIRE	2	36-00206-01
39	XJ-4 HEAT SINK	1	39-00206-07
40	XJ-4 HEAT SINK PLATE	1	39-00206-08
41	TERMINAL 212A	2	78-00612-00
42	SCREW M3X8 WH/MS	7	40-03008-03
43	SCREW M3X12 BH/MS	6	40-03012-01
44			
45	SCREW 3X12 WH/MS BLK	12	40-03012-23
46	XJ-4 EQ CONTROL PCB BRACKET	2	39-00206-14
47	XJ4 VOLUME MOUNTING BRACKET	1	39-00206-19
48	SCREW M3X8 BH/MS 'BLK'	23	40-03008-01
49	METAL WASHER d8Xd3x0.5MM	10	35-00001-00
50	METAL WASHER d12xd4x1MM	4	35-00030-00

51	METAL WASHER d10xd3x0.5MM	4	35-00009-00
52	SCREW d3X8 BH/ST	30	40-13008-01
53	FIBRE WASHER d14xd3x1.5MM	5	35-10019-00
54	XJ-4 SOCKET PCB BRACKET 'L'	1	39-00206-11
55	XJ-4 SOCKET PCB BRACKET 'R'	1	39-00206-13
56	SCREW d2.6 x 8 BH/ST	19	40-12608-01
57	SCREW M2.6X6 PH/MS 'TAPTITE'	9	40-02606-50
58	SCREW M4X12 BH/12 BH/MS	2	40-04012-01
59	M4 NUT	2	35-40008-00
60	SCREW d3X10 BH/ST	4	40-13010-01
61	XJ-4 CD PANEL MOUNTING BRACKET	2	39-00206-12
62	STEEL NUT M3	4	35-40007-00
63	4150 PANEL FIXING PLATE	6	39-04150-08
64	XJ-4 CD FRONT MTG BKT (B)	1	39-00206-03
65	XJ-4 CD FRONT MTG BKT (C)	1	39-00206-04
66	XJ-4 CD REAR MTG BKT (B)	2	39-00206-02
67	XJ-4 CD REAR MOUNTING BKT A	2	39-00206-01
68	METAL WASHER d3Xd10x1MM	1	35-00010-00
69	XJ-4 R/C LENS (RED)	1	43-00206-26
70	METAL WASHER d14x3.2x1MM	3	35-00015-00
71	FIBRE WASHER d3xd8x0.5MM	2	35-10060-00
72	SCREW M2X4 PH/MS 'TAPTITE'	3	40-02004-50
73	SCREW M3X6 BH/MS 'BLK'	2	40-03006-01
74	SCREW M3X6 BH/MS 'TAPTITE'	7	40-03006-51
75	SCREW d3X8 BH/ST 'BLK'	2	40-13008-21
76	SCREW d3X12 WH/ST 'A'	5	40-13012-13
77	XJ-4 LCD FILTER "AMP" (WHT) NEW	1	43-00206-16
78	XJ-4 LCD FILTER "CD" (WHT) NEW	1	43-00206-17
79	XJ-4 LCD GREEN PLT "AMP"	1	43-00206-19
80	XJ-4 LCD GREEN PLT "CD"	1	43-00206-20
81	FELT 10X12X0.8MM BLK W/TAPE	1	68-00206-01
82	SPONGE 15X15X10MM W/TAPE	2	81-00206-00
83	POWER AMP PCB 94V0 1.6MM	1	11-00206-07
84	PHONE JACK PCB 94V0 1.6MM	1	11-00206-19
85	SP JACK PCB 94V0 1.6MM	1	11-00206-21
86	CONNECTOR PCB 94HB 1.6MM	1	11-00206-09
87			
88	LED/SENSOR PCB 94HB 1.6MM	1	11-00206-20
89	EQ PCB 94HB 1.6MM	1	11-00206-22
90	POWER TACT SW PCB 94HB 1.6MM	1	11-00206-13
91	VOLUME PCB 94HB 1.6MM	1	11-00206-10
92	VOLUME LED PCB 94HB 1.6MM	1	11-00206-17
93	BALANCE PCB 94HB 1.6MM	1	11-00206-18
94			
95			
96			
97			
98	AMP DISPLAY PCB 94HB 1.6MM	1	11-00206-11
99	FUNCTION SWITCH PCB 94HB 1.6MM	1	11-00206-08
100	EI-66 VDE SF-66E/14B/16A/22A	1	15-00115-02

[illegible]

[illegible]

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Ref. NO.	Description	QTY.	Mfr's Part No.
1	XJ-4 CASS DOOR LENS 'A'	1	43-00206-23
2	XJ-4 CASS DOOR LENS 'B'	1	43-00206-24
3	XJ-4 TUNER DISPLAY LENS	1	43-00206-25
4	XJ-4 TUNER LCD BRACKET (WHT)	1	48-00206-00
5	XJ-4 TUNING KNOB	1	51-00206-02
6	XJ-4 BAND KNOB (AM)	1	52-00206-00
7	XJ-4 BAND KNOB (FM)	1	52-00206-01
8	BAND KNOB (FM/STEREO)	1	52-00206-02
9	XJ-4 CASS KNOB (REC) 'L'	1	53-00206-00
10	XJ-4 CASS KNOB (PLAY) 'L'	1	53-00206-01
11	XJ-4 CAS KNOB (REW) 'L'	1	53-00206-02
12	XJ-4 CASS KNOB (F.F) 'L'	1	53-00206-03
13	XJ-4 CASS KNOB (ST/EJ) 'L'	1	53-00206-04
14	XJ-4 CASS KNOB (PAUSE) 'L'	1	53-00206-05
15	XJ-4 CASS KNOB (PLAY) 'R'	1	53-00206-06
16	XJ-4 CASS KNOB (REW) 'R'	1	53-00206-07
17	XJ-4 CASS KNOB (F.F) 'R'	1	53-00206-08
18	XJ-4 CASS KNOB (ST/EJ) 'R'	1	53-00206-09
19	XJ-4 CASS KNOB (PAUSE) 'R'	1	53-00206-10
20	XJ-4 PRE-SET KNOB	1	53-00206-11
21	XJ-4 MEMORY KNOB	1	53-00206-14
22	XJ-4 HI-SPEED KNOB	1	53-00206-15
23	XJ-4 CRO2/NORMAL KNOB	1	53-00206-29
24	XJ-4 FRONT CABINET	1	60-00206-00
25	XJ-4 GEAR HOLDER	2	63-00206-00
26	XJ-4 GEAR	2	63-00206-01
27	XJ-4 CASS DOOR BRACKET	2	66-00206-02
28	XJ-4 CASS DOOR COVER (B)	1	66-00206-04
29	XJ-4 CASS DOOR COVER (A)	1	66-00206-05
30	XJ-4 CASS DOOR SPRING	2	36-00206-00
31	XJ-4 LEG DECKATION WIRE	2	36-00206-01
32	XJ-4 SOCKET PCB BKT 'L'	1	39-00206-11
33	XJ-4 SOCKET PCB BKT 'R'	1	39-00206-13
34	XJ-4 RECORD PCB BRACKET (B)	1	39-00206-16
35	XJ-4 CASS-KEY BRACKET	2	39-00206-18
36	1207 ANTENNA BKT. NEW	1	39-01207-12A
37	1207 ANTENNA BKT. PLATE NEW	1	39-01207-13A
38	XJ-4 MOUNTING BKT 'A' (NEW)	1	39-00206-09A
39	XJ-4 MOUNTING BKT 'B'	1	39-00206-10
40	4150 PANEL FIXING PLATE	9	39-04150-08
41	5831 RECORD PCB BKT. 'A'	1	39-05831-00
42	5831 RECORD PLATE 'R'	1	39-05831-02
43	METAL WASHER d10xd3x0.5MM	2	35-00009-00
44	METAL WASHER d8xd3x0.5MM	4	35-00001-00
45	METAL WASHER d7x2.6x0.5MM	4	35-00012-00
46	FIBER WASHER d6x3x0.5MM	2	35-10007-00
47	SCREW M2x3 BH/MS	1	40-02003-51
48	SCREW M2x4 BH/MS	5	40-02004-51
49	SCREW M2.6x6 PH/MS	6	40-02606-50



## ELECTRICAL PARTS LIST

### CAPACITORS

Ref. NO.	Description	Mfr's Part No.
C101	CER CAP 39PF	05-00390-00
C102	CER CAP 0.001UF	05-00102-82
C103		
C104	CER CAP 0.001UF	05-00102-82
C105	CER CAP 5PF NPO	05-00050-06
C106	CER CAP 0.001UF	05-00102-82
C107	CER CAP 5PF	05-00050-00
C108	CER CAP 0.02UF	05-00203-82
C109	CER CAP 15PF NPO	05-00150-06
C110	CER CAP 15PF NPO	05-00150-06
C111	CER CAP 0.001UF	05-00102-82
C112	CER CAP 2PF	05-00020-00
C113	E. CAP 100UF 10V	06-10107-00
C114	CER CAP 0.02UF	05-00203-82
C115	CER CAP 0.02UF	05-00203-82
C116	CER CAP 0.001UF	05-00102-82
C117	CER CAP 0.02UF	05-00203-82
C118		
C119	CER CAP 330PF	05-00331-00
C120	E. CAP 2.2UF 50V	06-50225-00
C121	E. CAP 2.2UF 50V	06-50225-00
C122	MYLAR CAP 0.068UF	05-02683-10
C123	MYLAR CAP 0.082UF	05-02823-10
C124	MYLAR CAP 0.082UF	05-02823-10
C125	MYLAR CAP 0.018UF	05-02183-10
C126	MYLAR CAP 0.018UF	05-02183-10
C127	CER CAP 330PF	05-00331-00
C128	CER CAP 330PF	05-00331-00
C129	E. CAP 1UF 50V	06-50105-00
C130	E. CAP 1UF 50V	06-50105-00
C131	CER CAP 0.02UF	05-00203-82
C132	CER CAP 10PF NPO	05-00100-06
C133	POLY CAP 360PF	05-09361-05
C134		
C135		
C136	MYLAR CAP 0.022UF	05-02223-10
C137	E. CAP 220UF 10V	06-10227-00
C138	CER CAP 0.02UF	05-00203-82
C139	E. CAP 4.7UF 50V	06-50475-00
C140	CER CAP 0.01UF	05-00102-82
C141	CER CAP 0.02UF	05-00203-82
C142		
C143	CER CAP 5PF	05-00050-00
C144	CER CAP 0.02UF	05-00203-82
C145	CER CAP 0.02UF	05-00203-82
C146	CER CAP 0.02UF	05-00203-82

C147	CER CAP 0.02UF		05-00203-82
C148	CER CAP 0.02UF		05-00203-82
C149	CER CAP 0.02UF		05-00203-82
C150			
C151	CER CAP 30PF		05-00300-00
C152	E. CAP 1UF 50V		06-50105-00
C153	E. CAP 4.7UF 50V		06-50475-00
C201	E. CAP 0.22UF		06-50224-00
C202	MYLAR CAP 0.01UF		05-02103-10
C203			
C204	CER CAP 0.02UF		05-00203-82
C205	E. CAP 100UF 10V		06-10107-00
C206	CER CAP 0.02UF		05-00203-82
C207	E. CAP 220UF 10V		06-10227-00
C208	CER CAP 0.001UF		05-00102-82
C209			
C210			
C211	CER CAP 0.02UF		05-00203-82
C212	CER CAP 15PF		05-00150-00
C213	CER CAP 15PF		05-00150-00
C214	CER CAP 0.02UF		05-00203-82
C215	E. CAP 47UF 10V		06-10476-00
C216	CER CAP 0.02UF		05-00203-82
C217			
C218	E. CAP 47UF 10V		06-10476-00
C219	E. CAP 1UF 50V		06-50105-00
C220			
C221			
C222	CER CAP 0.01UF		05-00103-82
C223	CER CAP 0.01UF		05-00103-82
C224	CER CAP 0.02UF		05-00203-82
C225	CER CAP 0.001UF		05-00102-82
C301	MYLAR CAP 0.001UF		05-02102-10
C302	MYLAR CAP 0.001UF		05-02102-10
C303	MYLAR CAP 0.001UF		05-02102-10
C304	MYLAR CAP 0.001UF		05-02102-10
C305	E. CAP 100UF 10V		06-10107-00
C306	MYLAR CAP 0.022UF		05-02223-10
C307	E. CAP 1UF 50V		06-50105-00
C308	E. CAP 0.47UF 50V		06-50474-00
C309	E. CAP 1UF 50V		06-50105-00
C310	E. CAP 47UF 10V		06-10476-00
C311	E. CAP 1UF 50V		06-50105-00
C312	MYLAR CAP 0.001UF		05-02102-10
C313	MYLAR CAP 0.0033UF		05-02332-10
C314	MYLAR CAP 0.001UF		05-02102-10
C315	MYLAR CAP 0.001UF		05-02102-10
C316	MYLAR CAP 0.001UF		05-02102-10
C317	MYLAR CAP 0.001UF		05-02102-10
C318	MYLAR CAP 0.001UF		05-02102-10

C319	E. CAP 100UF 10V		06-10107-00
C320	MYLAR CAP 0.022UF		05-02223-10
C321	E. CAP 1UF 50V		06-50105-00
C322	CER CAP 0.02UF		05-00203-82
C323	E. CAP 220UF 10V		06-10227-00
C324	E. CAP 2.2UF 50V		06-50225-00
C325	E. CAP 1UF 50V		06-50105-00
C326	E. CAP 47UF 10V		06-10476-00
C327	E. CAP 22UF 10V		06-10226-00
C328	E. CAP 1UF 50V		06-50105-00
C329	MYLAR CAP 0.001UF		05-02102-10
C330	MYLAR CAP 0.0033UF		05-02332-10
C331	MYLAR CAP 0.001UF		05-02102-10
C332			
C333			
C334	CER CAP 470PF		05-00471-00
C335	CER CAP 0.02UF		05-00203-82
C336	E. CAP 220UF 10V		06-10227-00
C337	MYLAR CAP 0.001UF		05-02102-10
C338	CER CAP 200PF		05-00201-00
C339	MYLAR CAP 0.001UF		06-02102-10
C340	E. CAP 33UF 10V		06-10336-00
C341	E. CAP 220UF 10V		06-10227-00
C343	E. CAP 1000UF 10V		06-10108-00
C345	E. CAP 47UF 10V		06-10476-00
C346	E. CAP 10UF 10V		06-10106-00
C401	E. CAP 100UF 10V		06-10107-00
C402	CER CAP 100PF		05-00101-00
C403	CER CAP 100PF		05-00101-00
C404	CER CAP 0.1UF		05-00104-82
C501			
C502	CER CAP 390PF		05-00391-00
C503	E. CAP 10UF 10V		06-10106-00
C504	CER CAP 33PF		05-00330-00
C505	CER CAP 33PF		05-00330-00
C506	E. CAP 100UF 10V		06-10107-00
C507	E. CAP 22UF NP		06-16226-05
C508			
C509	E. CAP 100UF 10V		06-10107-00
C510	E. CAP 100UF 10V		06-10107-00
C591	CER CAP 0.02UF		05-00203-82
C592	CER CAP 0.02UF		05-00203-82
C593	CER CAP 0.02UF		05-00203-82
C601	E. CAP 4.7UF 50V		06-50475-00
C602	E. CAP 4.7UF 50V		06-50475-00
C603	E. CAP 4.7UF 50V		06-50475-00
C604	E. CAP 4.7UF 50V		06-50475-00
C605	E. CAP 100UF 10V		06-10107-00
C606	E. CAP 220UF 10V		06-10227-00
C607	MYLAR CAP 0.022UF		05-02223-10

C608	E. CAP 4.7UF 50V		06-50475-00
C609	MYLAR CAP 0.001UF		05-02102-10
C610	MYLAR CAP 0.033UF		05-02333-10
C611	MYLAR CAP 0.0033UF		05-02332-10
C612	MYLAR CAP 0.1UF		05-02104-10
C613	MYLAR CAP 0.01UF		05-02103-10
C614	E. CAP 0.33UF 50V		06-50334-00
C615	MYLAR CAP 0.033UF		05-02333-10
C616	E. CAP 0.47UF 50V		06-50474-00
C617	E. CAP 4.7UF 50V		06-50475-00
C618	E. CAP 4.7UF 50V		06-50475-00
C619	MYLAR CAP 0.022UF		06-02223-10
C620	MYLAR CAP 0.001UF		05-02102-10
C621	MYLAR CAP 0.033UF		05-02333-10
C622	MYLAR CAP 0.0033UF		05-02332-10
C623	MYLAR CAP 0.1UF		05-02104-10
C624	MYLAR CAP 0.01UF		05-02103-10
C625	E. CAP 0.33UF 50V		06-50334-00
C626	MYLAR CAP 0.033UF		05-02333-10
C627	E. CAP 0.47UF 50V		06-50474-00
C628	E. CAP 4.7UF 50V		06-50475-00
C629	E. CAP 4.7UF 50V		06-50475-00
C630	E. CAP 0.22UF 50V		06-50224-00
C631	E. CAP 4.7UF 50V		06-50475-00
C632	E. CAP 100UF 10V		06-10107-00
C633	E. CAP 4.7UF 50V		06-50475-00
C634	E. CAP 0.22UF 50V		06-50474-00
C635	E. CAP 4.7UF 50V		06-50475-00
C636	MYLAR CAP 0.0039UF		05-02392-10
C637	E. CAP 10UF 10V		06-10106-00
C638	E. CAP 100UF 10V		06-10107-00
C639	E. CAP 4.7UF 50V		06-50475-00
C640	E. CAP 4.7UF 50V		06-50475-00
C641	E. CAP 100UF 10V		06-10107-00
C642	E. CAP 100UF 10V		06-10107-00
C643	MYLAR CAP 0.0039UF		05-02392-10
C644	E. CAP 47UF 10V		06-10476-00
C645	E. CAP 220UF 10V		06-10227-00
C701	E. CAP 2.2UF 50V		06-50225-00
C702	CER CAP 500PF		05-00501-00
C703	E. CAP 47UF 10V		06-10476-00
C704	E. CAP 4.7UF 50V		06-50475-00
C705	E. CAP 2.2UF 50V		06-50225-00
C706	CER CAP 500PF		05-00501-00
C707	E. CAP 47UF 10V		06-10476-00
C708	E. CAP 47UF 10V		06-10476-00
C709	E. CAP 4700UF 35V		06-35478-00
C710	E. CAP 1000UF 16V		06-16108-00
C711	MYLAR CAP 0.15UF		05-02154-10
C712	MYLAR CAP 0.15UF		05-02154-10

C713	E. CAP 1000UF 16V		06-16108-00
C714	E. CAP 47UF 10V		06-10476-00
C715	E. CAP 0.22UF 50V		06-50224-00
C716	E. CAP 100UF 10V		06-10107-00
C717	CER CAP 0.02UF		05-00203-82
C718	E. CAP 100UF 10V		06-10107-00
C719	CER CAP 0.02UF		05-00203-82
C720	E. CAP 100UF 10V		06-10107-00
C721			
C722	E. CAP 100UF 10V		06-10107-00
C723	CER CAP 0.02UF		05-00203-82
C724	E. CAP 220UF 10V		06-10227-00
C725	E. CAP 10UF 10V		06-10106-00
C726	CER CAP 0.02UF		05-00203-82
C727	E. CAP 100UF 10V		06-10107-00
C728			
C729	E. CAP 100UF 10V		06-10107-00
C730	CER CAP 0.02UF		05-00203-82
C731	E. CAP 100UF 10V		06-10107-00
C732			
C733	E. CAP 100UF 10V		06-10107-00
C734	E. CAP 2200UF 25V		06-25228-00
C736	CER CAP 0.02UF		05-00203-82
C737	CER CAP 0.02UF		05-00203-82
C738	CER CAP 0.02UF		05-00203-82
C739	CER CAP 0.02UF		05-00203-82
C740	CER CAP 0.02UF		05-00203-82
C741	CER CAP 0.02UF		05-00203-82
C742	CER CAP 0.02UF		05-00203-82
TC101	TRIMMER CAP 10PF 3PIN		05-08100-03
TC102	TRIMMER CAP 10PF 3PIN		05-08100-03

**Resistor (All are carbon film, 1/4w, +5%)**

Ref. NO.	Description		Mfr's Part No.
R101	47K OHM		07-05473-00
R102	33 OHM		07-05330-00
R103	18 OHM		07-05180-00
R104	47K OHM		07-05473-00
R105	56 OHM		07-05560-00
R106	150K OHM		07-05154-00
R107	1K OHM		07-05102-00
R108	47 OHM		07-05470-00
R109	33K OHM		07-05333-00
R110			
R111	100 OHM		07-05101-00
R112	22K OHM		07-05223-00
R113	27K OHM		07-05273-00
R114	27K OHM		07-05273-00
R115	12K OHM		07-05123-00
R116	12K OHM		07-05123-00

R117	10K OHM		07-05103-00
R118	10K OHM		07-05103-00
R119	680 OHM		07-05681-00
R120	68K OHM		07-05683-00
R121	68K OHM		07-05683-00
R122	10K OHM		07-05103-00
R123	220 OHM		07-05221-00
R124	10K OHM		07-05103-00
R130	10K OHM		07-05103-00
R131	10K OHM		07-05103-00
R132	5.6K OHM		07-05562-00
R133	12K OHM		07-05123-00
R134	10K OHM		07-05103-00
R201	1K OHM		07-05102-00
R202	10 OHM		07-05100-00
R203	220K OHM		07-05224-00
R204	180 OHM		07-05181-00
R205	10K OHM		07-05103-00
R206	4.7K OHM		07-00472-00
R207	10K OHM		07-05103-00
R208			
R209	1K OHM		07-05102-00
R210	150K OHM		07-05154-00
R211			
R212	220 OHM		07-05221-00
R213	220 OHM		07-05221-00
Q204	4.7 OHM		07-05047-00
R215	4.7 OHM		07-05047-00
R216	22K OHM		07-05223-00
R217	15K OHM		07-05153-00
R218	1K OHM		07-05102-00
R219	220K OHM		07-05224-00
R220	10K OHM		07-05103-00
R221	220K OHM		07-05224-00
R222	220K OHM		07-05224-00
R223	220K OHM		07-05224-00
R301	10 OHM		07-05100-00
R302	100 OHM		07-05101-00
R303	8.2K OHM		07-05822-00
R304	6.8K OHM		07-05682-00
R305	180K OHM		07-05184-00
R306	12K OHM		07-05123-00
R307	10K OHM		07-05103-00
R308	100K OHM		07-05104-00
R309	180K OHM		07-05184-00
R310	330K OHM		07-05334-00
R311	100 OHM		07-05101-00
R312	680 OHM		07-05681-00
R313	2.7K OHM		07-05272-00
R314	10K OHM		07-05103-00

R315	10K OHM		07-05103-00
R316	10K OHM		07-05103-00
R317	22K OHM		07-05223-00
R318	10 OHM		07-05100-00
R319	100 OHM		07-05101-00
R320	8.2K OHM		07-05822-00
R321	6.8K OHM		07-05682-00
R322	180K OHM		07-05184-00
R323	12K OHM		07-05123-00
R324	180K OHM		07-05184-00
R325	330K OHM		07-05334-00
R326	100 OHM		07-05101-00
R327	330K OHM		07-05334-00
R328	680 OHM		07-05681-00
R329	100 OHM		07-05101-00
R330	10K OHM		07-05103-00
R331	2.7K OHM -		07-05272-00
R332	10K OHM		07-05103-00
R333	22K OHM		07-05223-00
R336	10K OHM		07-05103-00
R337	22 OHM		07-05220-00
R338	100 OHM		07-05101-00
R339	8.2K OHM		07-05822-00
R340	22K OHM		07-05223-00
R341	10K OHM		07-05103-00
R342			
R343			
R344			
R345	10 OHM		07-05100-00
R346	330 OHM		07-05331-00
R347	5.6K OHM		07-05562-00
R348	1.2K OHM		07-05122-00
R349	SEMI-FIXED VR2K d8MM 3-PIN 'H'		17-31202-08
R350			
R351	1.8K OHM		07-05182-00
R352	15K OHM		07-05153-00
R353	15K OHM		07-05153-00
R354	10K OHM		07-05103-00
R355	10K OHM		07-05103-00
R356	10K OHM		07-05103-00
R357	10K OHM		07-05103-00
R358	10K OHM		07-05103-00
R361	1K OHM		07-05102-00
R401	1 OHM		07-05010-00
R402	10K OHM		07-05103-00
R403	100 OHM		07-05101-00
R501			
R502	68K OHM		07-05683-00
R503	68K OHM		07-05683-00
R504			

R505	33K OHM		07-05333-00
R506	100K OHM		07-05104-00
R507	68K OHM		07-05683-00
R508	68K OHM		07-05683-00
R509	820 OHM		07-05821-00
R510	820 OHM		07-05821-00
R511			
R512			
R513	1K OHM		07-05102-00
R514	10K OHM		07-05103-00
R515	10K OHM		07-05103-00
R516	10K OHM		07-05103-00
R517	1M OHM		07-05105-00
R518	2.2K OHM		07-05222-00
R519	2.2K OHM		07-05222-00
R520	10K OHM		07-05103-00
R521	10K OHM -		07-05103-00
R522			
R523			
R524	10K OHM		07-05103-00
R525	10K OHM		07-05103-00
R526	680 OHM		07-05681-00
R527	10 OHM		07-05100-00
R528	10K OHM		07-05103-00
R529	10K OHM		07-05103-00
R530	10K OHM		07-05103-00
R531	10K OHM		07-05103-00
R532	10K OHM		07-05103-00
R533	10K OHM		07-00103-00
R534	10K OHM		07-05103-00
R535	10K OHM		07-05103-00
R536	4.7K OHM		07-05472-00
R537	4.7K OHM		07-05472-00
R538	1K OHM		07-05102-00
R539	1K OHM		07-05102-00
R540	1K OHM		07-05102-00
R541	1K OHM		07-05102-00
R542			
R543	10 OHM		07-05100-00
R544	1K OHM		07-05102-00
R545	100 OHM		07-05101-00
R546	10K OHM		07-05103-00
R547	10K OHM		07-05103-00
R548	100K OHM		07-05104-00
R549	22K OHM		07-05223-00
R550	1K OHM		07-05102-00
R551	1K OHM		07-05102-00
R552	1K OHM		07-05102-00
R601	2.2K OHM		07-05222-00
R602	560K OHM		07-05564-00

R603	4.7K OHM		07-05472-00
R604	220 OHM		07-05221-00
R605	4.7K OHM		07-05472-00
R606	220 OHM		07-05221-00
R607	560K OHM		07-05564-00
R608	2.2K OHM		07-05222-00
R609	560 OHM		07-05561-00
R610	220 OHM		07-05221-00
R611	2.2K OHM		07-05222-00
R612	680 OHM		07-05681-00
R613	1K OHM		07-05102-00
R614	680 OHM		07-05681-00
R615	2.2K OHM		07-05222-00
R616	680 OHM		07-05681-00
R617	1K OHM		07-05102-00
R618	680 OHM		07-05681-00
R619	12K OHM		07-05123-00
R620	560K OHM		07-05564-00
R621	270 OHM		07-05271-00
R622	2.2K OHM		07-05222-00
R623	4.7K OHM		07-05472-00
R624	3.3K OHM		07-05332-00
R625	120K OHM		07-05124-00
R626	4.7K OHM		07-05472-00
R627	12K OHM		07-05123-00
R628	560K OHM		07-05564-00
R629	270 OHM		07-05271-00
R630	2.2K OHM		07-05222-00
R631	220 OHM		07-05221-00
R632	4.7K OHM		07-05472-00
R633	3.3K OHM		07-05332-00
R634	120K OHM		07-05124-00
R635	4.7K OHM		07-05472-00
R636	270K OHM		07-05274-00
R637	270K OHM		07-05274-00
R638	120K OHM		07-05124-00
R639	47K OHM		07-05473-00
R640	100 OHM		07-05101-00
R641	3.3K OHM		07-05332-00
R642	680K OHM		07-05684-00
R643	100 OHM		07-05101-00
R644	100 OHM		07-05101-00
R645	6.8K OHM		07-05682-00
R646	120K OHM		07-05124-00
R647	100 OHM		07-05101-00
R648	56 OHM		07-05560-00
R649	56 OHM		07-05560-00
R650	56 OHM		07-05560-00
R651	56 OHM		07-05560-00
R652	47K OHM		07-05473-00

R653	4.7K OHM		07-05472-00
R701	470 OHM		07-05471-00
R702	10K OHM		07-05103-00
R703	470 OHM		07-05471-00
R704	10K OHM		07-05103-00
R705	5.6K OHM		07-05562-00
R706	10K OHM		07-05103-00
R707	2.2 OHM		07-05022-00
R708	2.2 OHM		07-05022-00
R709	220 OHM		07-05221-00
R710	220 OHM		07-05221-00
R711	10K OHM		07-05103-00
R712	56K OHM		07-05563-00
R713	10K OHM		07-05103-00
R714	47K OHM		07-05473-00
R715	4.7 OHM 1/2W		07-05047-10
R716	220 OHM		07-05221-00
R717	1 OHM		07-05010-00
R718	220 OHM		07-05221-00
R719	1 OHM 1/2W		07-05010-10
R720	100K OHM		07-05104-00
R721	1.5K OHM		07-05152-00
R722	56K OHM		07-05563-00
R723	4.7 OHM		07-05047-00
R724	1K OHM		07-05102-00
R725	4.7 OHM 1/2W		07-05047-10
R726	1K OHM		07-05102-00
R727	3.3M OHM 1/2W		07-05335-10
R728			
R729	100K OHM		07-05104-00
R730	1K OHM		07-05102-00
R731	10K OHM		07-05103-00
R732	100K OHM		07-05104-00

### Semiconductors

IC101	TA7358AP TOSHIBA		03-07358-16
IC102	TA8132AN TOSHIBA		03-08132-02
IC201	TC9307AF-014 TOSHIBA		03-09307-00
IC301	TA8189N TOSHIBA		03-08189-00
IC401	UPD6125AG-876 NEC		03-06125-00
IC501	TS-9201 SANYO		03-09201-01
IC601	BA3822LS ROHM		03-03822-00
IC603	BA3830S ROHM		03-03830-00
IC603	LC7561 SANYO		03-07561-00
IC701	TA8216H TOSHIBA		03-08216-00
D101	DIODE 1N4148		02-04148-00
D102	TUN DIODE SVC201SPA SANYO		02-00201-00
D103	TUN DIODE SVC201SPA SANYO		02-00201-00
D104	DIODE 1N4148		02-04148-00
D105	TUN DIODE SVC321SPA-C-2 SANYO		02-00321-00

D106	TUN DIODE SVC321SPA-C-2 SANYO		02-00321-00
D107	DIODE 1N4148		02-04148-00
D201	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D202	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D203	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D204	DIODE 1N4148		02-04148-00
D205			
D206	ZENER DIODE 12V 0.5W		02-50120-00
D207	DIODE 1N4148		02-04148-00
D208			
D209	DIODE 1N4148		02-04148-00
D210	DIODE 1N4148		02-04148-00
D211	DIODE 1N4148		02-04148-00
D212	DIODE 1N4148		02-04148-00
D213	DIODE 1N4148		02-04148-00
D214	DIODE 1N4148		02-04148-00
D215	DIODE 1N4148		02-04148-00
D216	DIODE 1N4148		02-04148-00
D217	DIODE 1N4148		02-04148-00
D218	DIODE 1N4148		02-04148-00
D219	DIODE 1N4148		02-04148-00
D220	DIODE 1N4148		02-04148-00
D221	DIODE 1N4148		02-04148-00
D222	DIODE 1N4148		02-04148-00
D301	DIODE 1N4148		02-04148-00
D302	DIODE 1N4148		02-04148-00
D303	DIODE 1N4148		02-04148-00
D304	DIODE 1N4001		02-04148-00
D305	DIODE 1N4001		02-04148-00
D306	DIODE 1N4148		02-04148-00
D307	DIODE 1N4148		02-04148-00
D308	ZENER DIODE 9.1V 0.5W		02-50091-00
D401	INFRARED LED		02-00102-00
D501	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D502	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D503	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D504	LED d3MM RED (LT0311G-41 L=24MM)		02-30041-02G
D505	DIODE 1N4148		02-04148-00
D506	LED 2X5MM RED (LT5311G-41) L=22		02-20005-02G
D507	LED TRIANGLE RED L311HD (K.B.)		02-00311-02
D508	LED TRIANGLE GRN L-311GD		02-00003-05
D509	LED 2X5MM L563ADT YEL S.SCREEN		02-20005-04S
D510	DIODE 1N4148		02-04148-00
D601	DIODE 1N4148		02-04148-00
D701	DIODE 1N4148		02-04148-00
D702	DIODE 1N4148		02-04148-00
D703	DIODE 1N4148		02-04148-00
D704	ZENER DIODE 9.1V 0.5W		02-50091-00
D705	ZENER DIODE 9.1V 0.5W		02-50091-00
D706	ZENER DIODE 6.8V 0.5W		02-50068-00

D707	ZENER DIODE 5.6V 0.5W		02-50056-00
D708	DIODE 1N5400		02-05400-00
D709	DIODE 1N5400		02-05400-00
D710	DIODE 1N5400		02-05400-00
D711	DIODE 1N5400		02-05400-00
D712	DIODE 1N4001		02-04001-00
D713	DIODE 1N4001		02-04001-00
D714	DIODE 1N4001		02-04001-00
D715	DIODE 1N4001		02-04001-00
D716			
Q101	TR. 9018G SAM SUNG		01-09018-07
Q102	TR. 9014C ITT		01-09014-03I
Q103			
Q104	TR. 9014C ITT		01-09014-03I
Q105	TR. 9014C ITT		01-09014-03I
Q201	TR. 9014C ITT		01-09014-03I
Q202	TR. 9014C ITT		01-09014-03I
Q203	TR. 9018G SAM SUNG		01-09018-07
Q204			
Q205	TR. 9014C ITT		01-09014-03I
Q206	TR. 9014C ITT		01-09014-03I
Q301	TR. 9014C ITT		01-09014-03I
Q302	TR. 9014C ITT		01-09014-03I
Q303	TR. 9014C ITT		01-09014-03I
Q304	TR. 9014C ITT		01-09014-03I
Q305			
Q306	TR. 9013G SAM SUNG		01-09013-07
Q307	TR. 8050C HITACHI		01-08050-03
Q308	TR. 9014C ITT		01-09014-03I
Q309	TR. 9014C ITT		01-09014-03I
Q310	TR. 9014C ITT		01-09014-03I
Q311	TR. 9014C ITT		01-09014-03I
Q312	TR. 9014C ITT		01-09014-03I
Q401	TR. 9014C ITT		01-09014-03I
Q501			
Q502	TR. 9012G SAM SUNG		01-09012-07
Q503	TR. 9012G SAM SUNG		01-09012-07
Q504	TR. 9014C ITT		01-09014-03I
Q505	TR. 9014C ITT		01-09014-03I
Q506	TR. 9014C ITT		01-09014-03I
Q507	TR. 9014C ITT		01-09014-03I
Q508	TR. 9014C ITT		01-09014-03I
Q509	TR. 9014C ITT		01-09014-03I
Q510	TR. 9014C ITT		01-09014-03I
Q601	TR. 9014C ITT		01-09014-03I
Q602	TR. 9014C ITT		01-09014-03I
Q603	TR. 9014C ITT		01-09014-03I
Q604	TR. 9014C ITT		01-09014-03I
Q605	TR. 9014C ITT		01-09014-03I
Q701	TR. 9014C ITT		01-09014-03I

Q702	TR. 9014C ITT		01-09014-03I
Q703	TR. 9014C ITT		01-09014-03I
Q704	TR. 9014C ITT		01-09014-03I
Q705	TR. 8050C HITACHI		01-08050-03
Q706	TR. 8050C HITACHI		01-08050-03
Q707	TR. KSA928-Y SAM SUNG		01-00928-00
Q708	TR. 9014C ITT		01-09014-03I
Q709	TR. 8050C HITACHI		01-08050-03
Q710	TR. 9013G SAM SUNG		01-09013-07
Q711	TR. 9014C ITT		01-09014-03I
Q712	TR. 8050C HITACHI		01-08050-03
Q713	TR. 9014C ITT		01-09014-03I

# **MISC.**

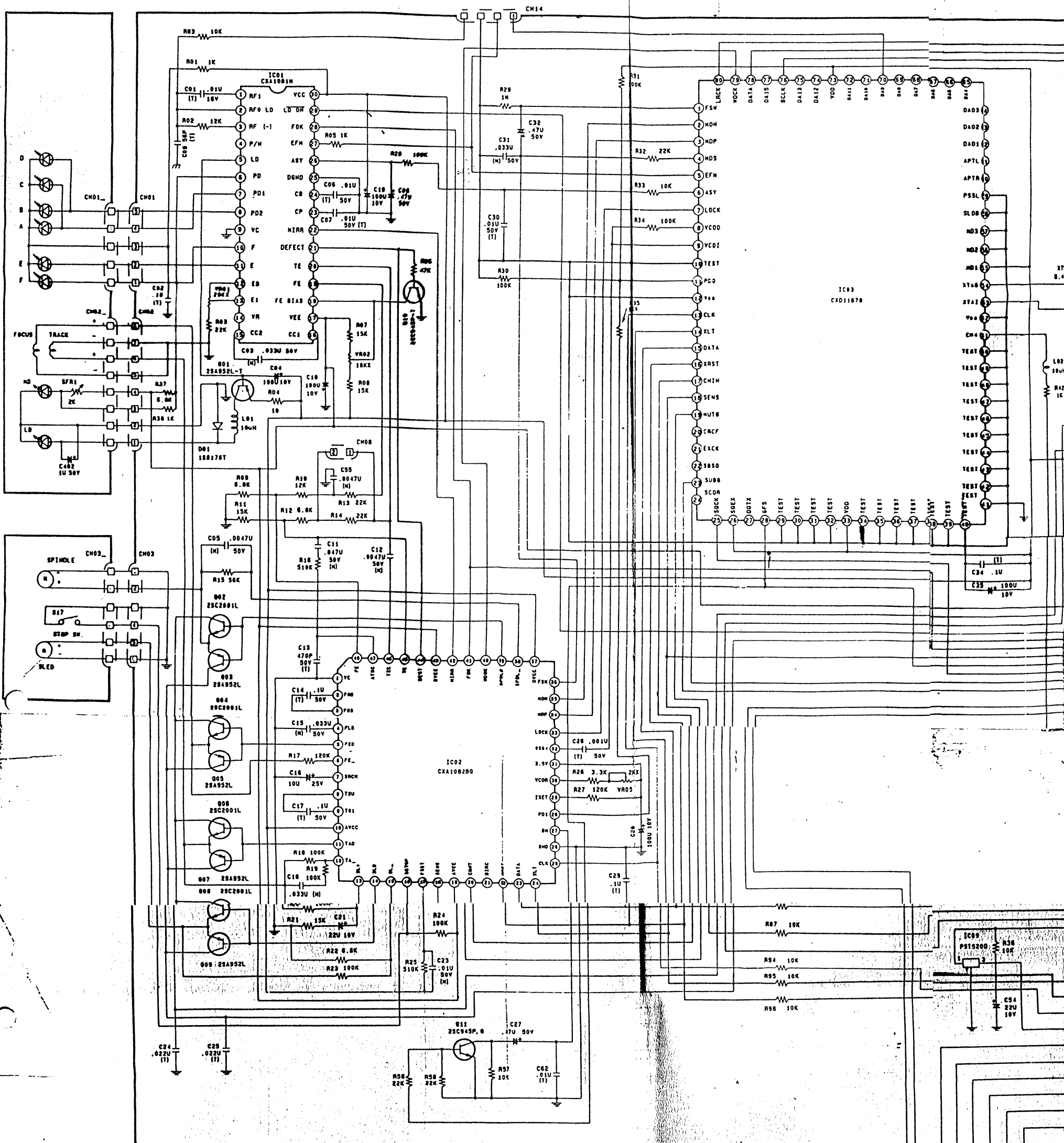
L101	7MM IFT FM ANT 807152 COILS		08-77152-00
L102	FM COIL d5MM X 3.5T 0.8MM CW		09-35050-01
L103	FM COIL d4.5MM X 3.5T 0.8MM CW		09-35045-01
L104	AM COIL 65:12T L=100MM M5		09-06512-10
L201	CHOKE COIL 12MH d6X8MM		09-12000-00
T101	10MM IFT ORG 767-545SMD 3-5621		08-00545-03
T102	10MM AM IFT YEL 900-029 SUMIDA		08-00029-04
T103	10MM IFT RED 1A1014N		08-01014-02
T104	10MM IFT PNK 234B		08-00234-07
T701			
T301	10MM REC. BIAS OSC 4313-H053SMD		08-00053-00
CF101	CER FILTER SFE10.7MS3A (RED)		09-50107-20
CF102	CER FILTER SFU450B		09-50450-00
X102	CER RES. CSB456F18		09-50456-00
X201	CRYSTAL 75KHz (DT-381)		04-00075-00
X401	CER RES. (HR Z455K) HOORAY		09-50455-00H
X501	CER RES. DRHF4.00 'TOKO'		09-50040-00
LCD201			
LCD501			
LCD601			
S501	INFRARED RECEIVER SBX-1610-52		02-61610-52
LP201	LAMP 5V 100MA 4X8MM		13-00206-00
LP202	LAMP 5V 100MA 4X8MM		13-00206-00
LP501	LAMP 5V 100MA 4X8MM		13-00206-00
LP502	LAMP 5V 100MA 4X8MM		13-00206-00
LP601	LAMP 5V 100MA 4X8MM		13-00206-00
LP602	LAMP 5V 100MA 4X8MM		13-00206-00
SW101	P. SW MINI-15T2F-d3.2H T. LOCK		16-44303-00
SW201	TACT SW 1P2T JTM-1105A		16-10102-03J
SW202	TACT SW 1P2T JTM-1105A		16-10102-03J
SW203	TACT SW 1P2T JTM-1105A		16-10102-03J
SW204	TACT SW 1P2T JTM-1105A		16-10102-03J
SW205	TACT SW 1P2T JTM-1105A		16-10102-03J
SW206	TACT SW 1P2T JTM-1105A		16-10102-03J
SW207	TACT SW 1P2T JTM-1105A		16-10102-03J
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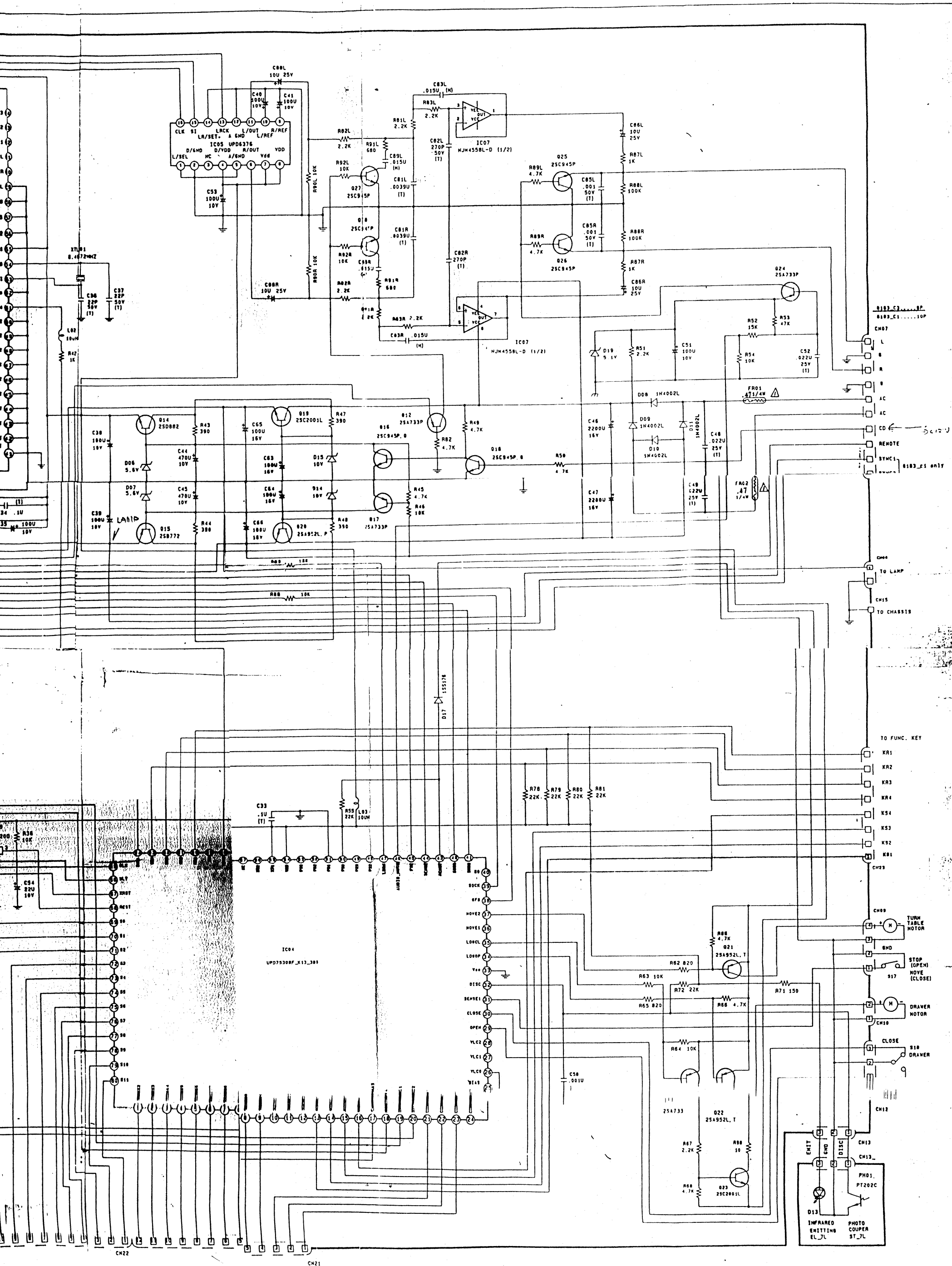
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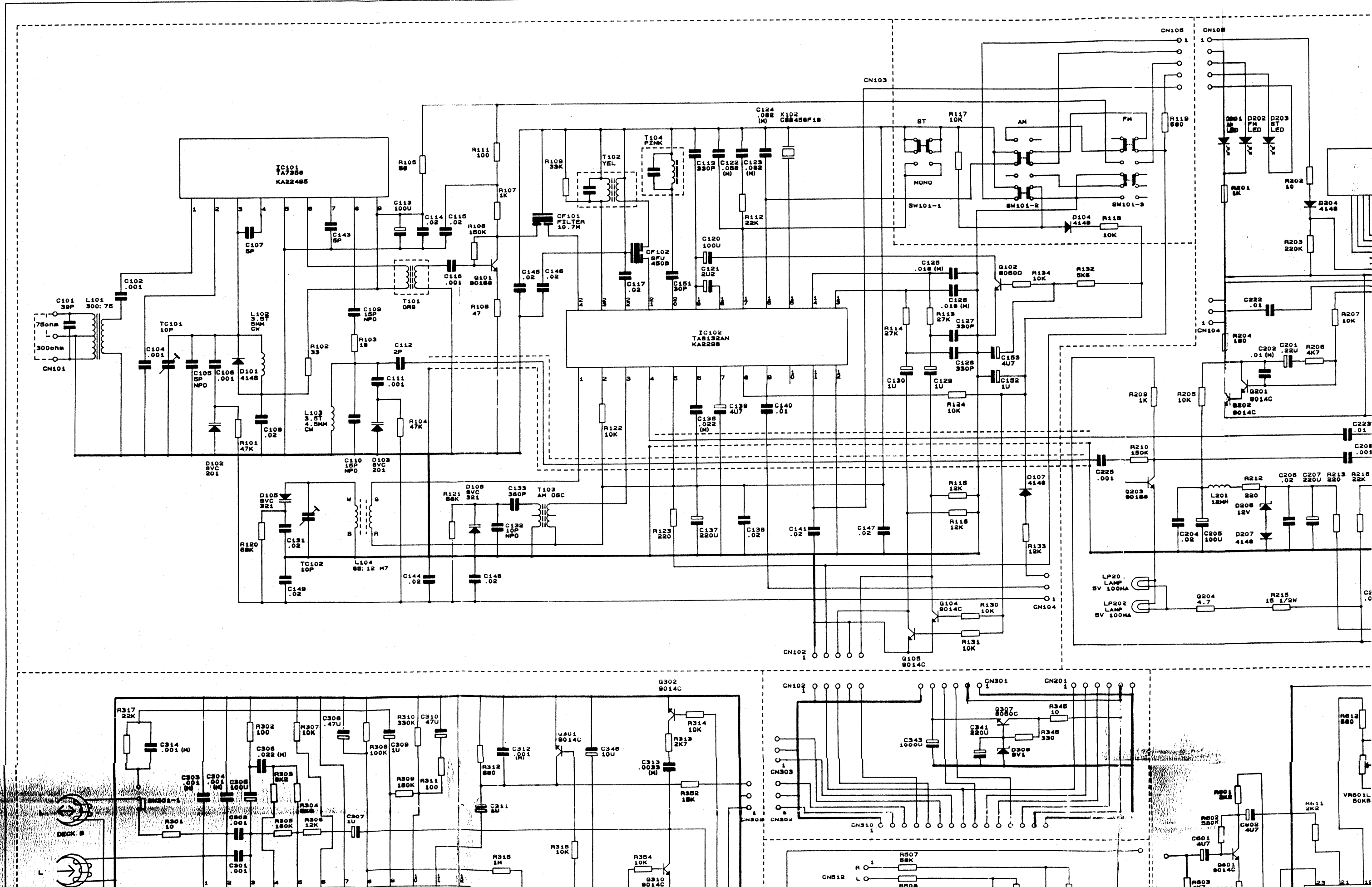


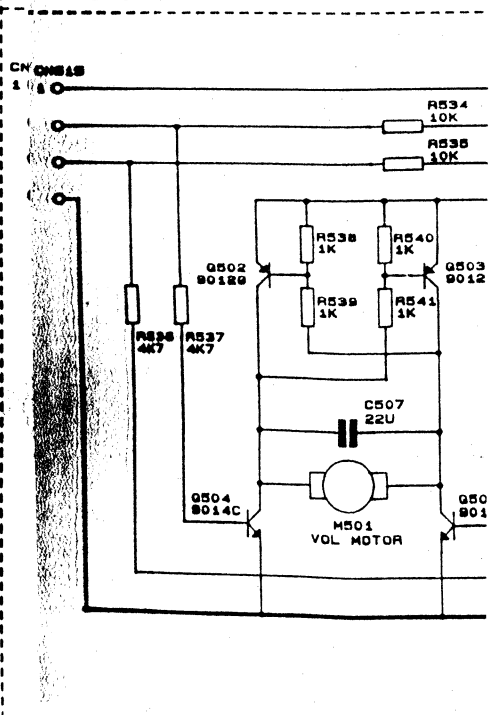
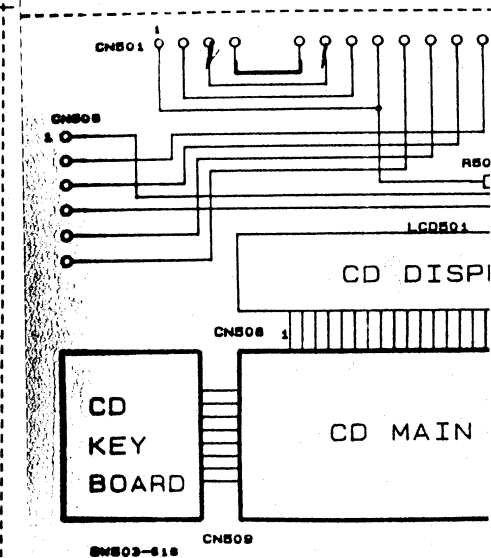
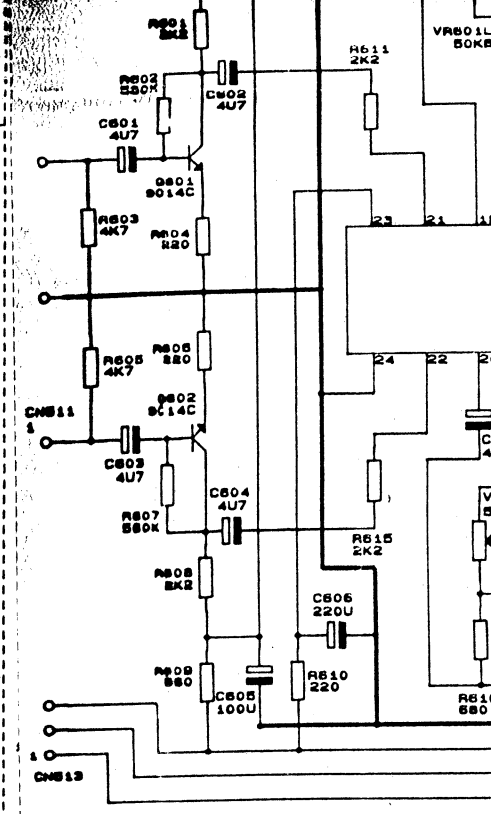
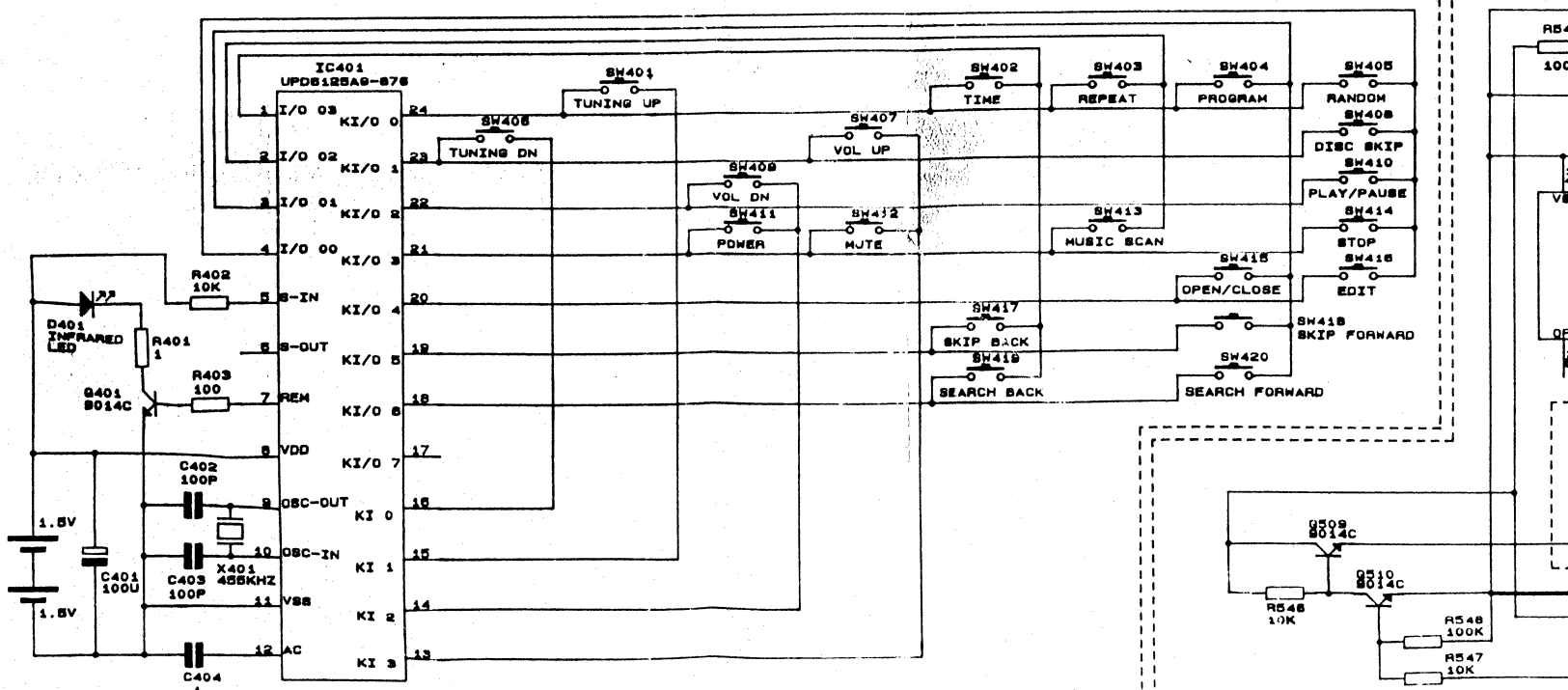
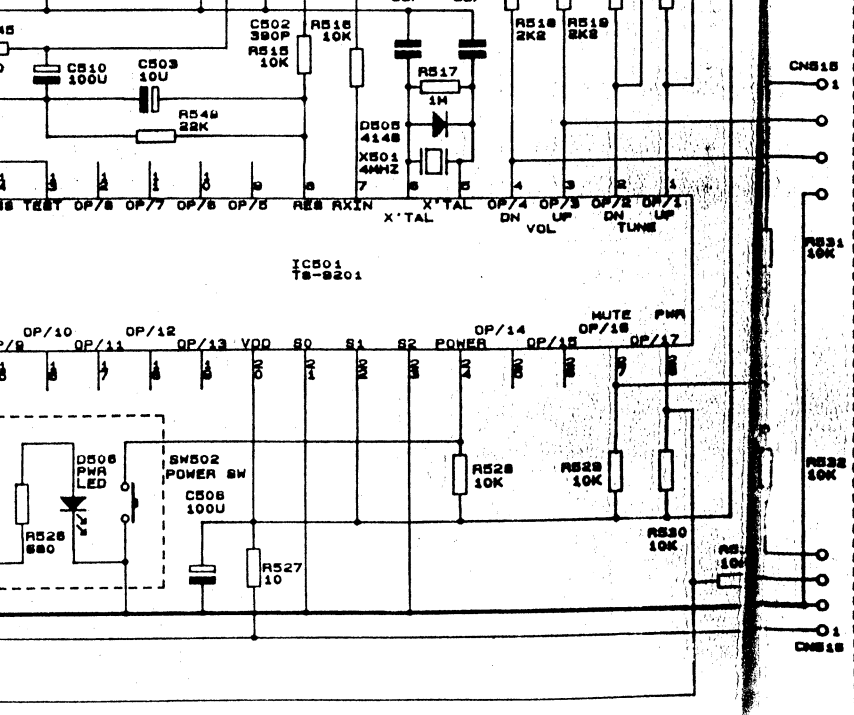
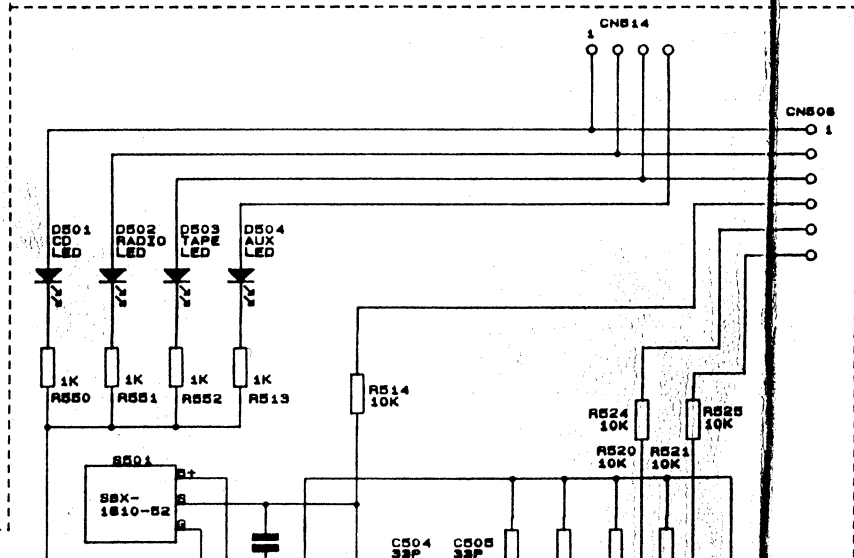
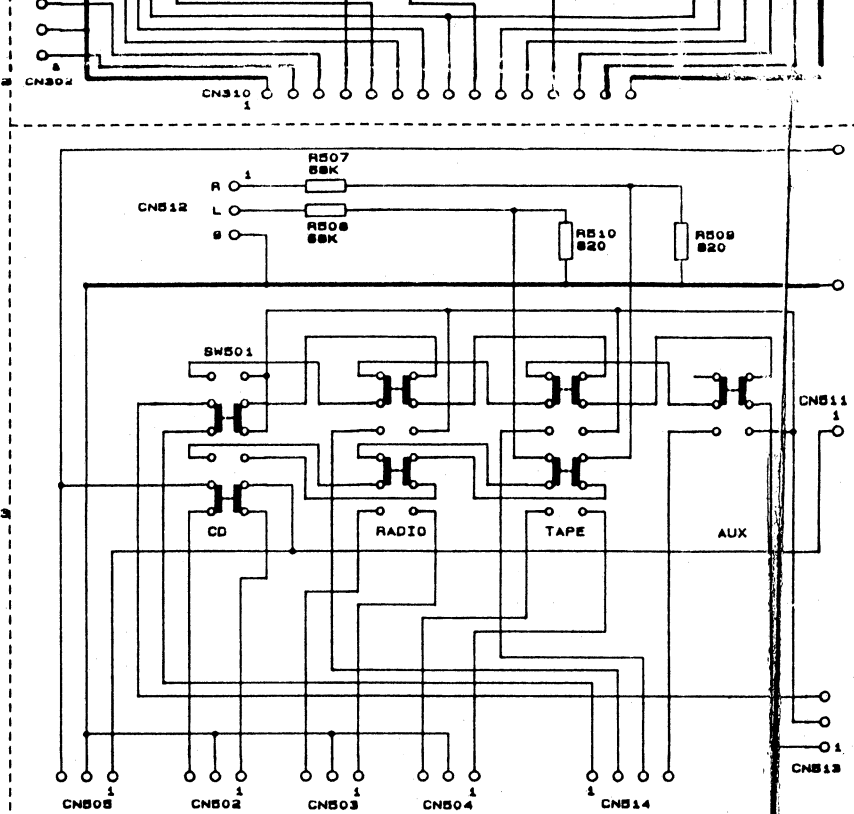
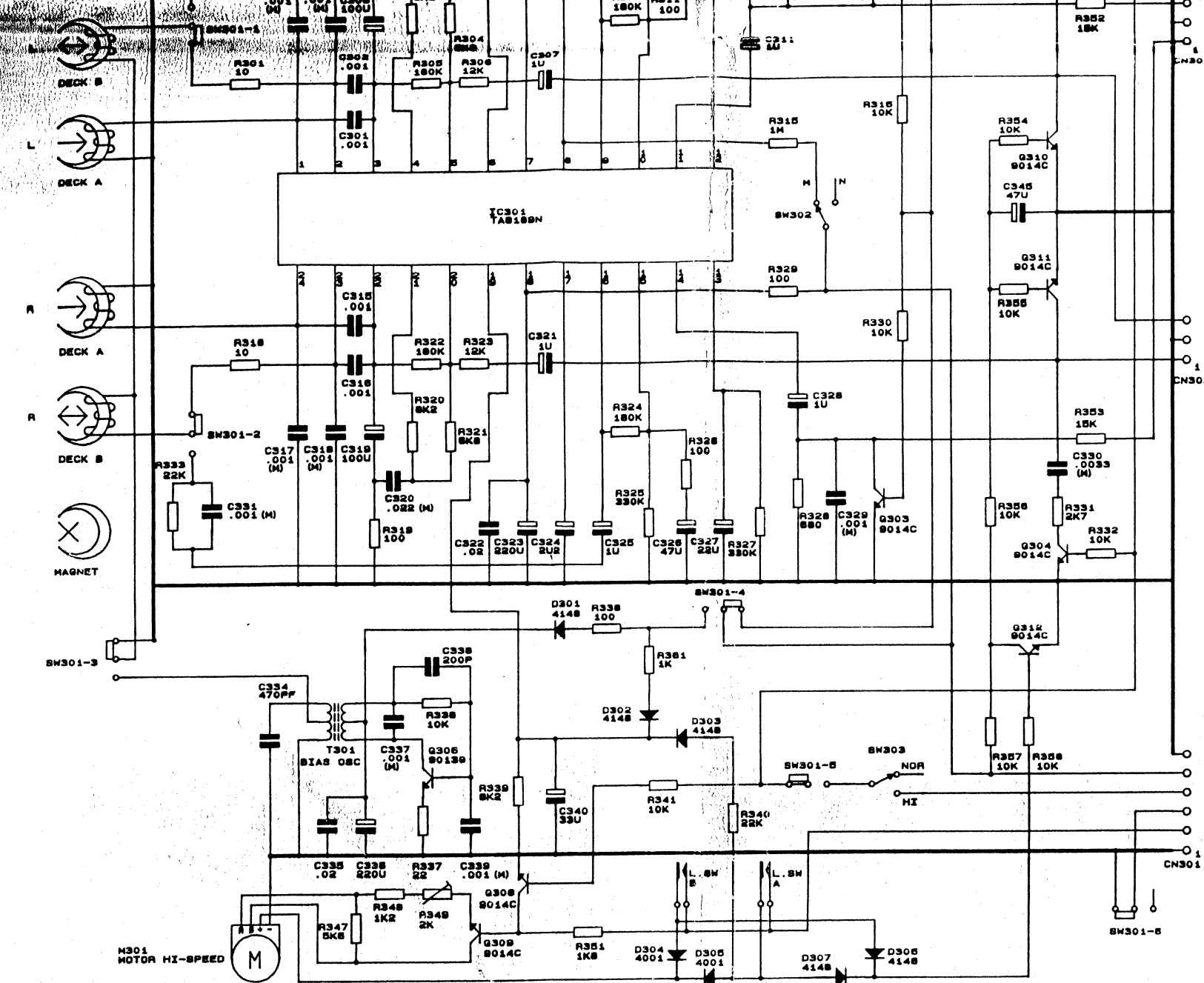
ALTERATION  
MAY 18 '93

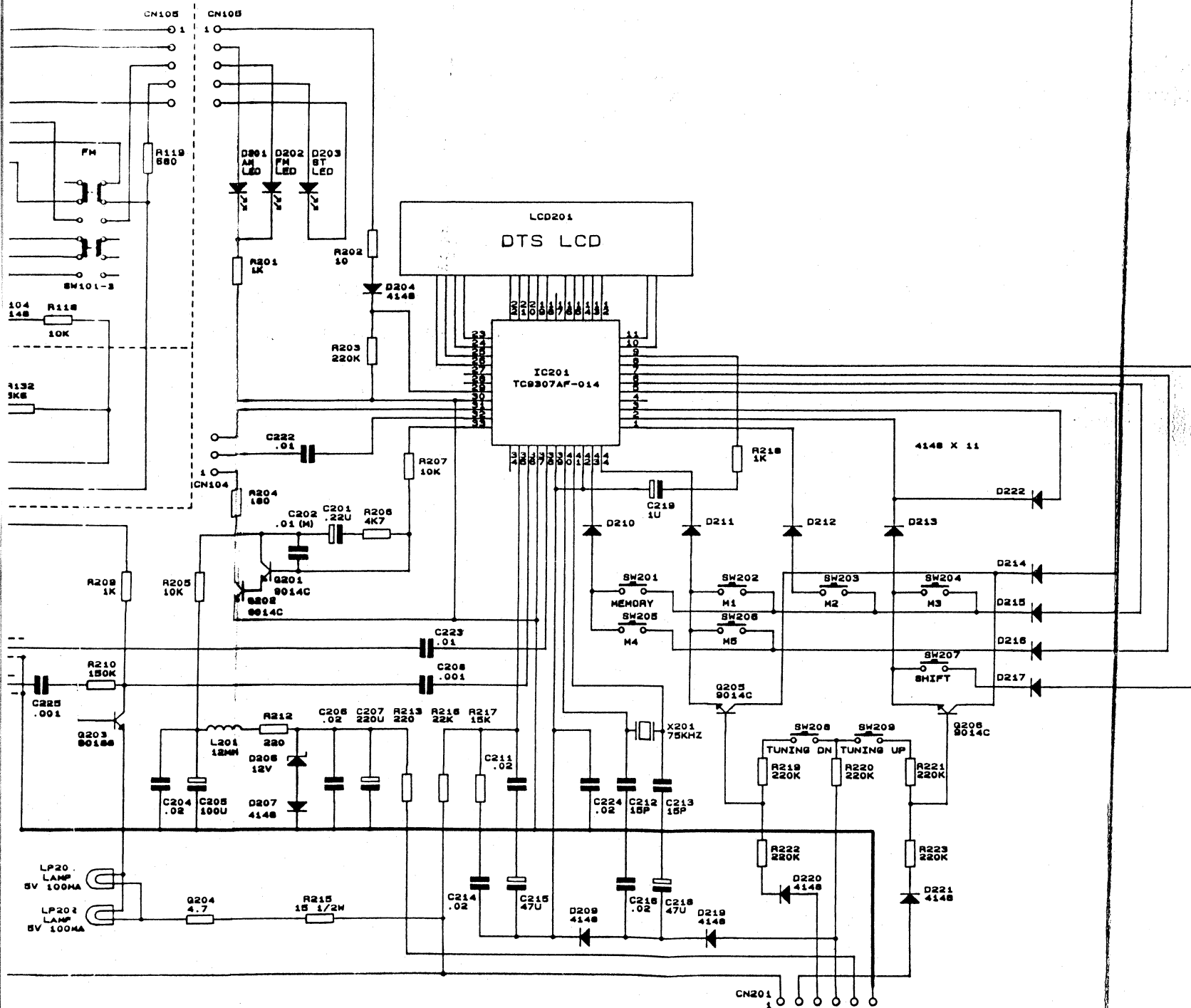
MODEL X.T.4

# CD SERVO SCHEMATIC.









# WARNING

AFTER COMPLETING THE SERVICING OF THIS PRODUCT AND BEFORE RETURNING IT TO YOUR CUSTOMER, MEASURE THE RESISTANCE BETWEEN BOTH PRONGS OF THE AC PLUG AND ALL EXPOSED METAL PARTS TO BE SURE IT EXCEEDS 2.2 MEGA OHMS (POWER SWITCH IF ANY SHOULD BE IN ITS POSITION). IF THE RESISTANCE MEASURED IS LESS THAN 2.2 MEGA OHMS, THE UNIT SHOULD NOT BE RETURNED TO THE CUSTOMER UNTIL THE CAUSE FOR THE REDUCED POWER LINE TO EXPOSED METAL PARTS RESISTANCE HAS BEEN CORRECTED AND THE UNIT PASSED THE ABOVE TEST.

THIS MARK INDICATES THAT THE ADJACENT COMPONENT IS CONSIDERED CRITICAL WITH RESPECT TO THE RISK OF FIRE AND ELECTRICAL SHOCK ASSOCIATED WITH THIS PRODUCT. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY PARTS SUPPLIED BY MANUFACTURER WHOSE PART NUMBERS ARE INDICATED ON THE PARTS LIST ATTACHED.

# SERVICING INSTRUCTIONS

1. DISCONNECT POWER CORD BEFORE SERVICING.
2. REPLACE CRITICAL COMPONENTS ONLY WITH FACTORY PARTS OR RECOMMENDED EQUIVALENTS.
3. FOR AC LINE POWERED UNITS - BEFORE RETURNING REPAIRED UNIT TO USER, USE AN OHMMETER TO MEASURE FROM BOTH AC PLUG BLADES TO ALL EXPOSED METALLIC PARTS. THE RESISTANCE SHOULD BE MORE THAN 100,000 OHMS.

